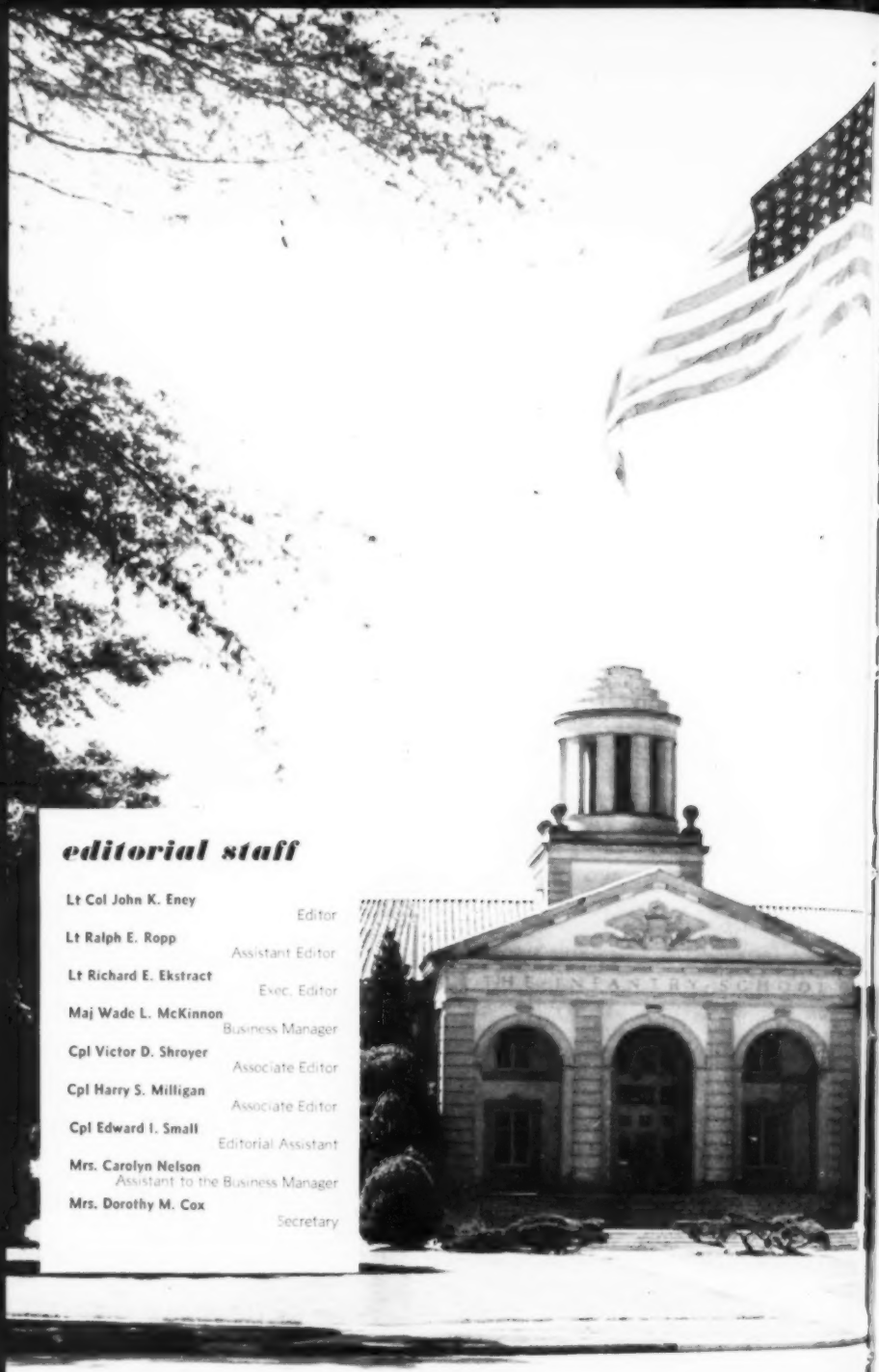
THE Infantry SCHOOL QUARTERLY

the magazine for Infantrymen

july 1954



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THE

Infantry

SCHOOL QUARTERLY

volume 44 number 3 july 1954

the infantry school

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Cover Designed by Cpl Richard T. Lubey

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letters

The Fact of the Matter

Camp Gordon, Ga.

Sir:

. . . compliments on "Help for the S1" (Jan 54).

Did the author check OCAFF letter dated 18 June 53, subject: "General Staff Responsibility for Civil Affairs/Military Government at Echelons Below Department of the Army?" This gives General Staff status to Civil Affairs Military Government and removes G1 from responsibility for the activity.

C. E. Hertz, Lt Col

Yes! Capt Pugh explains: "Since there are no military government personnel provided at regimental and battalion level, The Infantry School teaches that the S1 is still the logical staff officer to assist the commander with these responsibilities. As Colonel Hertz points out, however, the letter precludes G1 from the activity."

—Editor.

Historical Uniforms

Fort Kobbe, Canal Zone

Sir:

. . . the different uniforms now being illustrated on the back covers of the Quarterly would make an ideal set for framing. Where can they be purchased?

Thomas C. Gordon, M/Sgt

Sorry, the uniform series is not available in set form. We spotted the originals hanging in the Fort Benning Main Officer's Open Mess recently and had them photographed. The pictures on the Quarterly are the only available reproductions.

—Editor.

Misleading

511th Abn Inf Regt
Ft Campbell, Ky.

Sir:

Does the author of "Fighting Backwards" (Jan 54) imply by his thanks on page 64 that the 26th Inf Regt developed these ideas in Korea? Misleading, isn't it?

John D. Cone, Col, Cmdg

The object of this statement was to establish a period that "time-wise" would be familiar to readers. The concept described was developed in Germany. Regret that we were misleading.—Editor.

Lesson Plan

Co C, 129th Regt, 44th Div
Fort Lewis, Wash.

Sir:

. . . January issue of The Quarterly had a story entitled, "Fighting in Forests" . . . I have recently conducted a series of four-hour classes on attack in the woods. Most of my lesson plans came straight from that article!

Richard A. Johnston, 2d Lt

The Magazine for All Arms

13 D.C.O. Lancers
Rawalpindi, Pakistan

As a member of the Army of Pakistan, I am naturally interested in the latest military developments. My brother, an Infantryman, recently introduced me to THE INFANTRY SCHOOL QUARTERLY. After reviewing several issues I am convinced that it should be read not just by all Infantrymen but by all members of supporting arms as well . . . send me a subscription blank right away.

M. A. Faruki, Major

. . . to the editor

Our Error

Sir: West Haven, Conn.

I believe I have found an error in Cpl Norman S. Poser's fine article, "The Sunday Punch," in the Jan 54 issue.

Corporal Poser refers to a 15-inch battery used by the Federal Army as the "Petersburg Express," and then goes on to tell of a 13-inch mortar named the "Dictator." I think you will find these to be one and the same. The "Dictator" was mounted on a railroad flatcar and employed against the Confederates from various positions along the tracks.

Robert W. Granger, 2d Lt

✕ *We bow. Lieutenant Granger is correct. For purposes of clarity we might add that the "Express" was originally the railroad car that carried the mortar, but later seems to have become identified with the weapon itself.—Editor.*

'Copters' and Comments

Sir: Hq I Corps

. . . Read "Raid from the Sky" . .. it's good.

Here are a few facts gleaned from two helicopter raid problems conducted by the 45th Division . . . we used 17 H-19's to shuttle 197 troops. Raids were planned and rehearsed. Loading tests indicate that helicopters could be loaded and unloaded by assault teams in 7 to 15 seconds.

Helicopters must have a flat area 50 feet in diameter to push against for take off, landing and hovering. This makes landing troops and supplies on most ridges impossible without real work by your pioneers. Resupply . . . sling mechanism was removed (apparently) for ease of maintenance and to increase load . . . they are a valuable addition to Army transportation and offer tactical possibilities untried in combat.

Lyman S. Faulkner, Lt Col

Meet the I.G.

Office of The Inspector General
Department of the Army

Sir:

. . . "Meet the IG" (April 54) depicts clearly and concisely the constructive nature of Inspector General activities — something we have stressed at this level for many years.

General Noce (Lt Gen Daniel Noce, Inspector General of the Army) has heartily indorsed your article, as does our entire staff. While we have never sought publicity in connection with our duties and responsibilities, your efforts in this instance bear our unqualified approval.

Herman O. Lane, Col.
Chief, Inspections Division

Correction!

Numerous sharp-eyed Infantrymen caught an error in "Command the Trigger" in the April Quarterly. In the second printing the error was corrected. For those of you who received the uncorrected copies, Figures 2 and 4 on pages 15 and 17 were transposed in printing. All references to Figures 2a or 2b should read 4a and 4b. Likewise, all references to Figures 4a, 4b and 4c should read 2a, 2b and 2c. The black bullseyes in Figures 3a, 3b, 4a and 4b were intended to appear grey.

—Editor.

Editor's Page

Dear Reader:

Our peacetime standing Army has always been smaller than that of any other great nation. We entered the War between the States with 13,000 Regulars, and within months expanded the Army to more than a million men. In World War II, we did the same thing, only on a much larger scale.

But today, we face a new situation. For the first time in our history we find it necessary to keep a large war machine during peacetime. And this gives the Army, as well as the civilian population, new problems that must be faced and understood.

It has been suggested that the public be better educated on the nature and mission of the armed services, that unit esprit be fostered within the regiments.

We feel these suggestions are just and, in the main, good. But perhaps the answer can be found in a different place—in the heart of the soldier himself . . . The Infantryman for example.

Basically, he has not changed much since 1776, 1863, 1918, 1945 or 1950. He is a quiet, decent sort of man, whose will and patriotism often remain hidden until they are called upon in battle. He is just another American. It is well not to forget that the holders of the Medal of Honor were in many cases men from varying civilian occupations who found themselves called to the colors. Others were professional Infantrymen who felt that they were merely doing their job.

The public must realize that heroes cannot be mass-produced. The Infantry is doing its difficult, unspectacular peacetime job of training itself, and its soldiers, to fight should that ever be necessary. We feel that if it is possible to duplicate the close-knit esprit of the past in an Army of a million and a half, America need never be alarmed about the spirit and ability of its soldiers.

The Editor

an Infantryman learns
to disarm and kill

Dear Infantrymen:

During my more than thirty-one years as an Infantryman, I have seen the Infantry develop and grow into an effective weapon used in the diplomatic fight for peace, and a relentless force on the battlefield in the actual struggle of war.

There have been many changes in the Infantry in the past three decades . . . changes not only in weapons and other vital equipment, but changes in the techniques of war and the speed with which war moves.

Through this turbulent era of changes in war and the implements of war, one thing has remained steadfast . . . and that is the mission of the Infantry. This will never change.

Deeply etched in time are the records of the Infantryman's accomplishments and the righteous principles he has so willingly fought and died to preserve. His signature is carved on hills from Sicily to Burma, from Germany to Korea. His march across the pages of history is truly a proud and honorable parade.

The standards upheld throughout the Infantry have always been high and those standards have been exemplified at The Infantry School. My predecessors at The Infantry School have been unwavering in upholding these high standards.

I am sincerely honored to return to The Infantry School as its Commandant, and I intend to see that it remains progressive and that its high standards remain inviolate.

Joseph H. Harper

JOSEPH H. HARPER
Major General, USA
Commandant, TIS

Security at Night

by Maj. John Lance

I RAN INTO Lt. Col. Burrows the other day. I had not seen him since before he went to Korea two years ago. It was not long before we were sitting over coffee talking tactics.

"The night attack," he said, "that was our biggest problem over there."

"Why?"

"In the early days too often our men hadn't been thoroughly trained in night fighting. We had a lot of trouble getting good security for those attacks."

"Ever use security patrols?" I asked him.

"You mean reconnaissance patrols?"

"No. I mean patrols used as advance security to take possession of the probable line of deployment for the assault."

"Well," said the colonel, "we did use some advance security for some of our night attacks, but we never had it down to a real system. Let's hear what you've got."

Here is the method of using security patrols that I outlined to the colonel. This system was used to some extent in Korea and has been expanded in many units into an efficient technique.

A "security" patrol is neither a reconnaissance patrol nor a combat patrol. It may, however, gain valuable enemy information, or it may have the opportunity of silently eliminating an enemy outpost. Certainly the patrol must be armed so that it can fight should

it be discovered by the enemy.

Let's assume that a company-size night attack has been ordered. The commander, who gives the initial briefing in order to effect maximum coordination between patrols, directs that one NCO from each patrol report to him at a convenient vantage point. He speaks to each patrol leader something like this:

"Sergeant, you are to take four men from your platoon and secure the probable line of deployment at that gully (pointing). Two members of your patrol will return and report to me at the company CP at 2330 to give me last minute enemy information and to act as guides for your platoon. You will cross our present line at 2200. The platoon release point is that trail junction. Upon dismissal here, report to your platoon leader for additional instructions. Time now—1515. Any questions?"

Each platoon will furnish a patrol, consisting of four to six men. If there are obstacles that must be breached, the patrol may be larger. The patrols will carry at least one automatic weapon, preferably an AR, while the remaining members will be armed with M1's with **fixed bayonets.**

There are two reasons for carrying an automatic weapon. First, the presence of such a weapon will give the members of the patrol a psychological lift. Secondly, there will be three automatic weapons ready to deliver immediately retaliatory fire should the company's attack be discovered prematurely.

The platoon leaders should pick an assistant squad leader to lead the patrol (other key NCO's will be needed for reconnaissance) to issue squad orders and to spuervise the final preparations of the attack. The patrol should include at least one member of each rifle squad to assist in the final deployment of his respective squad if necessary.

These patrols have three jobs. The first is **to secure the probable line of deployment.** Naturally, six men cannot be expected to secure a platoon frontage between 80 and 100 yards wide, especially at night and when they are going to further deplete their strength by sending two men back to the platoon to act as guides. The patrols will simply secure a small piece of real estate at the spot indicated by the company commander. Thus the CO will know that at three separate points along his probable line of deployment there is a little "beachhead" that belongs to him. The platoons can now be directed toward these spots with some degree of security that they will not be ambushed or discovered prematurely by the enemy. The platoon leaders must nevertheless remember that the presence of these security elements to their front in no way relieves them of the responsibility of providing their own close-in frontal and flank security from the platoon release point forward.

The second job of the patrols is **to provide guides** for their parent platoons. Each patrol will furnish at least two guides. These guides will direct their respective platoons from the platoon release point to the

squad release point, whether the company crosses the line of departure in a company column or in a line of platoon columns. They will accompany the platoon to the probable line of deployment, having performed their necessary route reconnaissance on the first trip.

The final mission of the patrols is **to gather enemy information.** Since these patrols will, whenever possible, be placed within 100 to 200 yards of the objective, they will be in a good position to detect enemy movement, locate outguards or listening posts and generally watch the enemy position. The returning guides will bring back any enemy information obtained to the company commander. If the guides have already departed, a member of the security element can do this job.

The company commander will be responsible for the briefing of the patrol leaders. First of all, in his operations order he will indicate to the platoon leaders the size of the patrols and the time and place the patrol leaders will report for the patrol order. This briefing should be held early enough so that the patrol leaders will have time to make a daylight reconnaissance. The CO should tell the patrol leaders only those details of the attack plan that they must know to accomplish their mission. Thus, should a patrol member be captured there will be less chance of his jeopardizing the success of the attack.

What must the company commander's patrol order include? It must tell the size of the patrol, the location of the platoon release point, the exact spot on the probable line of deployment that he expects each patrol to occupy, the patrol's time of departure, the time and place the guides are to report on their return and any special instructions. The patrol's time of departure must be early enough to give the guides time to make their route reconnaissance and return, but not so early that the main body of the patrol has to remain in its exposed position for an undue length of time.

What is the next step? The patrol leader will now receive instructions and information from his platoon leader. He will be told the location of the squad release point, and will find out exactly how the patrol members will be used in the final deployment of the squads along the probable line of deployment and during the assault.

The patrol leader will now make his reconnaissance. He will make sure that he has coordination with friendly elements through which his patrol has to pass and with the adjacent patrol leaders. Then he will

---

The author, a '54 C&GSC graduate was commissioned from OCS in 1943. Shortly thereafter he served with B Co, 406th Infantry, 102d Division (Europe, Sept '44-Nov '47). He is a graduate of the Infantry Officer's Advanced Course, and a former instructor with the Tactical Department, The Infantry School.

gather the members of his patrol and give the patrol order. He must: 1. Orient the patrol members on the ground; 2. Appoint the guides; 3. Clearly define for each member the responsibilities of his position in the formation and along the probable line of deployment; 4. Define the route and location of the platoon and squad and squad release points; 5. Tell what action will be taken in case of enemy discovery, and, 6. Outline exactly by what means he will control the patrol.

Next the patrol leader will question the members to make sure they understand the order. If the situation permits, the patrol members, while waiting to move out, should practice by familiarizing themselves with the exact appearance of objects after dark. Before moving out, the patrol leader should conduct a last-minute equipment check.

Now for the actual conduct of the patrol . . . it will move out in column formation with individuals dispersed laterally and in depth consistent with the degree of visibility. Should enemy outposts or listening posts be discovered, the patrol must try to avoid enemy contact. In this case, the company commander should be informed of the patrol's new disposition as well as the location of the enemy. If the patrol leader decides that these enemy elements can be eliminated silently, this may be done if it will contribute to the accomplishment of the company's mission.

If the company is to cross the line of departure in company column, the patrol will positively identify the platoon release point during its movement forward. Then the entire patrol will move to the squad release point and finally to the probable line of deployment. The patrol will use the same route that is to be taken by the platoon. If there are no prominent terrain features, the patrol may have to mark the route, the control points, and even the probable line of deployment with engineer tape or telephone wire.

Now the patrol has reached the probable line of deployment. It will halt at the spot previously designated by the company commander, which will usually be in the center of the platoon zone of action. The patrol members who are to remain forward, including the patrol leader, will take up positions that prevent their being surprised by the enemy. The principal duty of these members now is to wait and observe. Significant enemy activity must be reported to the company commander, even if the security element has to be reduced to two men.

When the squads approach the probable line of deployment, the security elements may be able to help in the deployment of the squads by definings the limits of the platoon zone, visibility permitting. Then these patrol members will rejoin their respective squads unless they have been instructed otherwise by the platoon leader or the company commander.

While the security elements of the patrol have been watching from their positions on the probable line of deployment, the guides have returned to

the company's attack position. They will have used the same route over which they are to guide their platoon. Upon reporting to the company commander, the guides from each patrol give him any enemy information that the patrol has determined. When the platoons arrive in the attack position, the guides will give their platoon leaders pertinent enemy information and any minor changes in the route forward.

When the platoons move out, the guides will march at or near the head of the formation. On arrival at the platoon release point, the guides will begin their job of directing the platoon to the squad release point. Then the guides will rejoin their own squads. They may help in deploying their squad along the probable line of deployment.

The colonel listened to me intently throughout my description of these security patrols and their functions. I could see that he was impressed.

"Well organized advance security for the night attack," he mused. "It sounds good. Mind if I ask you a few questions?"

"Fire away."

"Well, wouldn't these patrols tip off the enemy that an attack is planned?"

"No, I wouldn't say so. Assume that all three patrols are discovered by the enemy. Of course, this would be highly unusual. But even if it did happen, such action over a frontage of 300 yards would indicate nothing more than normal patrol activity by an aggressive unit."

"I'll go along with that," said the colonel, "but if you're going to have these patrols, why limit their role so strictly?"

I had an answer to that one too: "The patrols are just an added item of insurance to facilitate control and increase security. They don't stop the platoon leader from being able to issue orders and supervise the night attack. The patrol helps him place his platoon in its prescribed location on the probable line of deployment."

I think I convinced the colonel, and I hope I can convince you, too, that if these patrols are properly planned and coordinated, they can contribute materially to the success of any night attack. They make control easier, establish real security and are a possible source of late enemy information. Like other phases of night combat, these patrol procedures must be thoroughly understood and vigorously applied in well conducted realistic night training.

CALLING AUTHORS

Every Infantryman harbors a "pet" idea that he'd like to become an author. Don't be bashful! If you don't happen to have a flair for writing, let us have your idea, and we'll help you put it in magazine form. Don't forget we pay for published articles. All articles or ideas should be sent to: The Editor, The Infantry School Quarterly, Book Department, Fort Benning, Georgia.

INFILTRATION...

IN LATE 1942 the allied armies had landed in North Africa. For more than three months they had advanced eastward. Their object: To join the victorious British Eighth Army and bottle up the Germans and Italians in Tunisia.

One of the American units was the 1st Infantry Division, which was operating with the 1st Ranger Battalion attached. The Division's mission was to capture Sfax, a small seaport on the Mediterranean. But in March 1943 "The Big Red One" had ground to a standstill.

The terrain in Tunisia was well suited to defense, and the Germans were masters of this type of warfare. Six miles east of the town of El Guettar two steep ridges converged on a narrow pass. Through this pass ran the only road from El Guettar to Sfax (Map A). The enemy occupied the pass and the ridge to the south. From these positions he could place accurate artillery fire on the American forces.

The ridges and the gently rolling valley beneath were treeless. Erosion had made many washes and gul-

Lt Col William S. Coleman

lies down the mountain sides. Rising to heights of 1200 feet above the valley, the steep ridges were strewn with large boulders. It was clear that the situation did not favor a frontal attack.

This was the picture when the 1st Ranger Battalion was called into action. Its mission was to relieve the pressure being exerted by the enemy in the mouth of the funnel formed by the two converging ridgelines.

The Rangers were well suited for their mission. They were thoroughly trained volunteers whose specialty was mountain warfare. It is doubtful whether a hardier group of American soldiers existed at the time. The battalion consisted of six rifle companies and a headquarters company. Each rifle company consisted of three officers and 63 enlisted men, divided into two platoons and a company headquarters.

The Battalion Commander's first problem was to get information about the enemy. On the morning of 18 March, a 12-man patrol from C Com-

pany succeeded in crawling, climbing and clawing its way around rocks, up and down mountains, to a position about 600 yards north of the enemy's right flank (Map B—location X). The enemy, considering this terrain impassable, had not established outposts there.

By evening the patrol had returned and reported its accomplishments. The next day the same patrol returned by the same route, made terrain sketches and brought back additional information on the mountainous terrain. Another patrol entered the high ground overlooking the American front and captured intact an Italian OP (Map B—Location Y) that had been giving data to the guns in the pass.

At 1900 hours 20 March the battalion commander called all his company commanders to his CP and told them that the battalion would make an attack that night. Company D, 1st Engineer Battalion, was attached to the Ranger Battalion for this operation. This was done for two reasons: First, because the engineers were equipped with 81mm mortars; and secondly, because they would later be able to remove wire to allow the 1st Infantry Division to pass through the draw should the attack be successful.

At 2100 the column pulled off the main road five miles west of El Guettar and headed into the mountains. All equipment was hand carried. The point consisted of the members of the patrol that had covered this route twice before. It was followed by the remainder of Company C, the other Ranger companies, and the engineers. It was a clean moonlit night.

The Rangers made their way over the rough ground by holding on to the rocks literally by their fingers and toes. The Engineer Company slowed down the column because of its heavier load and because the men were not accustomed to the rapid pace set by the Rangers.

In addition to the battalion SCR 536 net,* each company had its own 536 net. Although the enemy soon realized that some kind of action was taking place, he did not know its direction or strength. Since the column never crossed a skyline, it could not be seen from the enemy positions.

By 0500 the Rangers had reached their line of departure in a small level area about 350 yards above and 200 yards north of the enemy's right flank. The draw at this point was 300 to 400 yards across.

Company C was to make the assault a few minutes after 0500. The five other Ranger companies would furnish fire support until the battalion commander knew where to commit them. One officer and 14 enlisted men from Company C, each armed with a Thompson submachine gun and 10 to 12 magazines, made up a volunteer assault group.

Map A. The situation at the time the 1st Ranger Battalion was called into action.

* The SCR 536 radio has since been replaced by the AN/PRC 6.

GAFSA
DJ ORBATA
DIV OBJ
SFAX
1st DIV
EL GUETTAR
DJ AHK
CHOTT
EL GUETTAR
N
5
miles
patrol route
ENEMY
GABES
DJ BERDA

With this group placed between the two platoons, Company C started the mad rush down to the enemy positions. Meanwhile the other companies stayed on the small plateau and supported with rifle and 60mm mortar fire. Each time the assault company captured an enemy machine gun position, two men would man the gun and start shooting at the next enemy machine gun. The sleeping Italians could not understand what was happening, and the surprise was complete.

Four German 88's and four Italian 100's soon started to fire on the Ranger companies on the plateau. The battalion executive officer called 1st Division Artillery by radio, and within five minutes these eight pieces were knocked out. Now the other Ranger companies joined the fight in the draw. At about 0630 the Engineer Company arrived, set up its 81mm mortars, and took up the targets that had been fired upon by the Rangers' 60's, whose ammunition by now was exhausted.

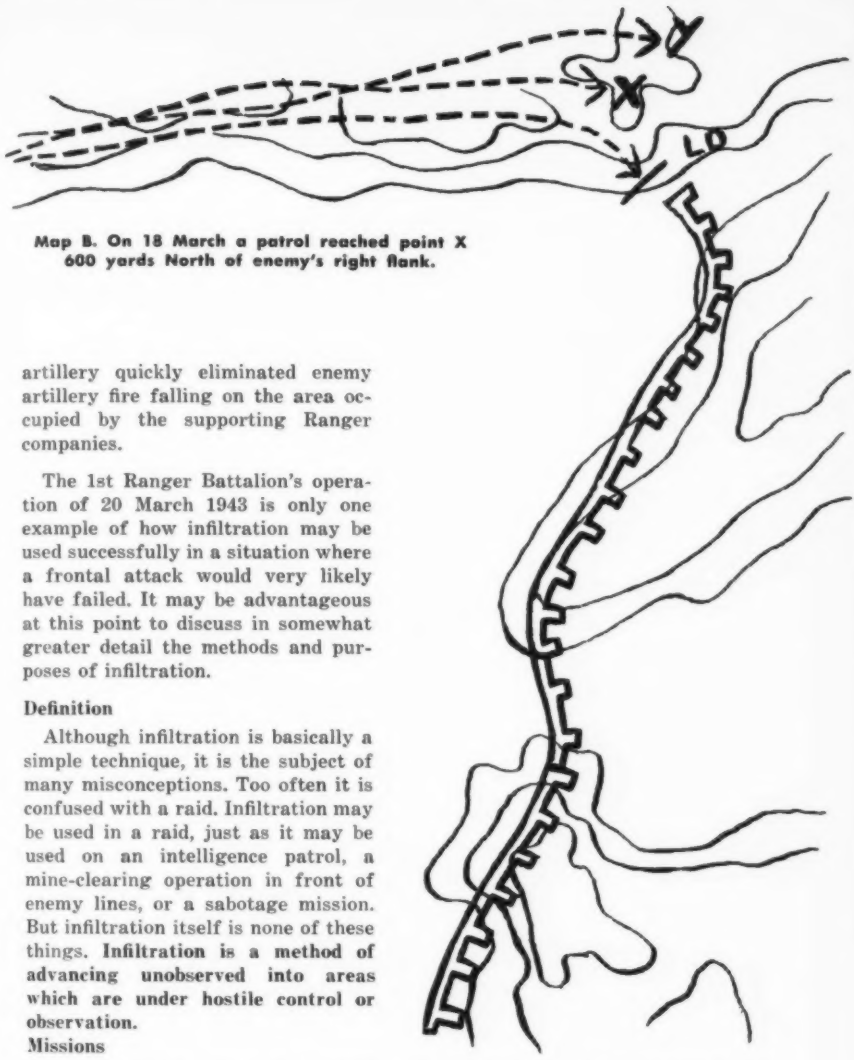
At 0800 the battalion commander told the 1st Division Deputy Commander that he could now move the division through the draw in a column of fours. At first the Division Commander did not believe that the Rangers' accomplishment was possible. The 1st Division started moving through that afternoon, on its way to Sfax. Enemy dead numbered about 250, while 200 were captured. The Rangers had one stretcher case, one walking wounded and no fatalities.

This was infiltration. A force of 600 men had crossed 12 miles of mountain paths during the night, surmounting obstacles considered impassable by the enemy. The failure of the enemy to place OP's or outposts on the mountain ridge on his right flank should be a constant reminder always to provide all-around security, regardless of the protection provided by possession of important terrain features.

A number of important points can be made from the infiltration just described. The Rangers' excellent physical condition contributed greatly to the success of the operation. These troops could climb, crawl and march 12 miles over the most rugged terrain and still make a vicious attack. The engineers, on the other hand, burdened by heavy equipment, were poorer conditioned, and were not able to join the attack until an hour and a half after it had begun.

The operation posed great problems of control and coordination, which were solved successfully by the commanders. Had the column met enemy delaying forces during the march, the attack would not have come off at dawn on a sleeping enemy. The original plan allowed for time in the assembly area before the assault, but this cushion was taken up by the slow-moving engineer company. A miscalculation of the engineers' rate of march could have caused the attack to fail.

Surprise, perhaps the most important single element, was complete. The aggressive assault on the enemy position by a small, well armed assault group completely disorganized and demoralized the enemy. The close cooperation of supporting division



Map B. On 18 March a patrol reached point X 600 yards North of enemy's right flank.

artillery quickly eliminated enemy artillery fire falling on the area occupied by the supporting Ranger companies.

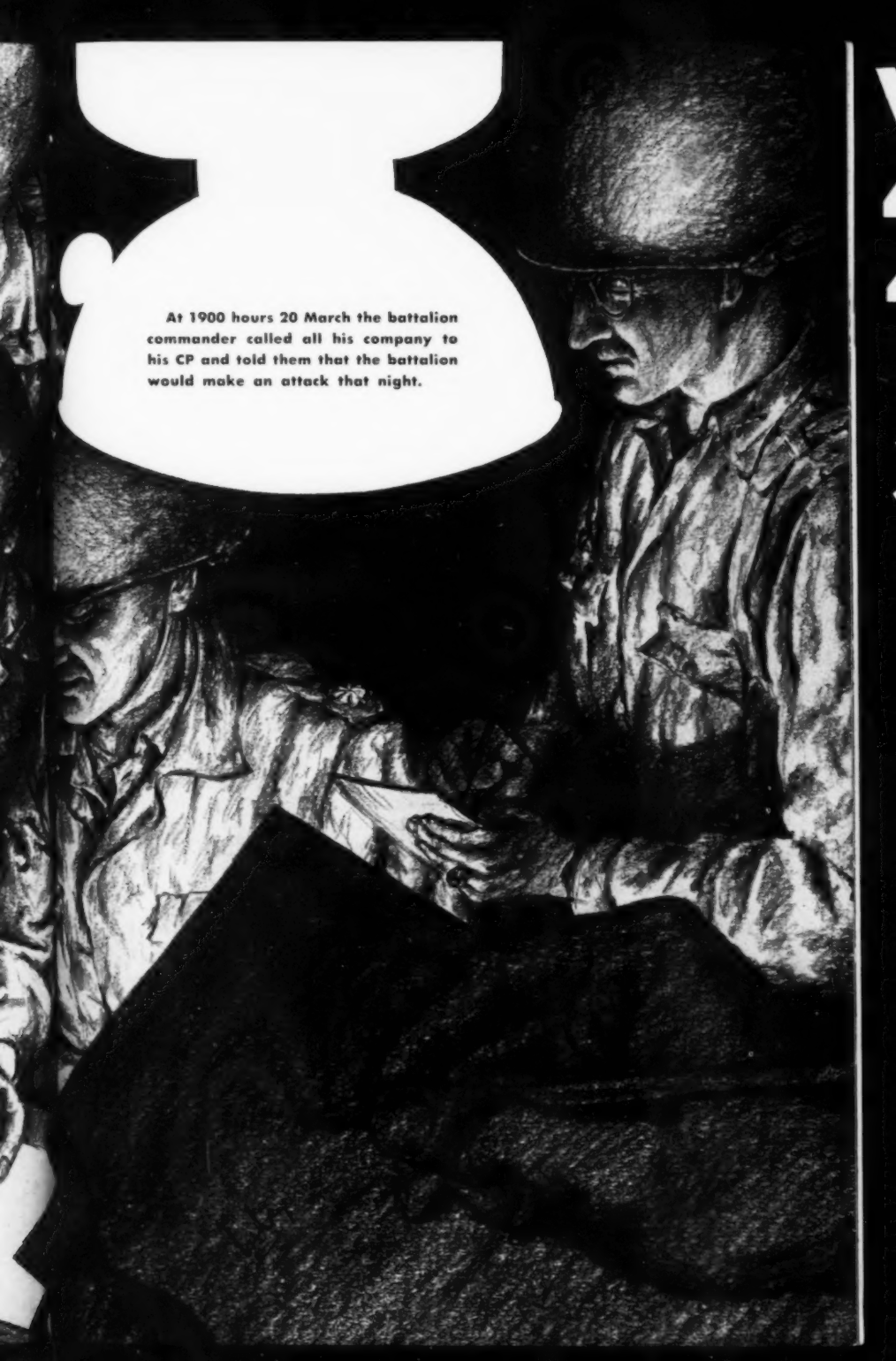
The 1st Ranger Battalion's operation of 20 March 1943 is only one example of how infiltration may be used successfully in a situation where a frontal attack would very likely have failed. It may be advantageous at this point to discuss in somewhat greater detail the methods and purposes of infiltration.

Definition

Although infiltration is basically a simple technique, it is the subject of many misconceptions. Too often it is confused with a raid. Infiltration may be used in a raid, just as it may be used on an intelligence patrol, a mine-clearing operation in front of enemy lines, or a sabotage mission. But infiltration itself is none of these things. **Infiltration is a method of advancing unobserved into areas which are under hostile control or observation.**

Missions

It is clear then that an infiltrating force may be used on several kinds of missions. The chief ones are: To obtain information of the terrain, strength, dispositions and supplies of the enemy; to disrupt hostile communications; to attack and destroy a supply point, bridge, command post or other vital installation; to attack the rear or flank of an enemy position in conjunction with a frontal attack; and to confuse and harass the enemy to divert him from other operations.


At 1900 hours 20 March the battalion commander called all his company to his CP and told them that the battalion would make an attack that night.

Infiltration is a simple technique

Size

The size of the infiltrating force depends solely on its mission. To secure information, two to four men may be the ideal number; to destroy a command post, a squad or platoon may be assigned; but if the mission is to attack the enemy's rear in conjunction with a coordinated frontal attack, a force varying in size from a platoon to a regiment might be used.

Weather and Terrain

Weather and terrain are important factors. Infiltration is best accomplished under conditions of limited visibility. Darkness, fog, heavy rain, dense undergrowth and rough terrain will prevent the enemy from seeing the infiltrating force. The commander should have a keen appreciation of terrain. If the enemy does not realize the importance of certain terrain features, he will defend them lightly or not at all. An alert commander can take advantage of such a mistake to infiltrate through enemy lines.

Infiltration cannot be used against all positions. A well organized, stable, closely knit defense in depth by a determined enemy may prevent any attempt at infiltration. But when the enemy's lines are over extended or when his front is fluid and constantly changing, infiltration has the greatest chance of being successful.

Surprise

Surprise is essential to success, since the whole objective of infiltration is to enter hostile areas unobserved. A slipping stone, a cough or sneeze, a dropped rifle or a lighted match may be all that is necessary to alert the enemy. Every possible effort must be made to keep the enemy ignorant of the operation.

Control and Security

The importance of control and security cannot be overstated. The movement to an assembly area in the rear of the enemy will usually be made in closed column. Consistent with security and control, detailed instructions should be issued prior to the operation, at least to the squad leaders. The instructions should include characteristics of the route, formations and prearranged squads for counter-measures in case of enemy action. Roads and trails should be avoided if possible.

If the terrain, visibility or enemy activity call for it, flank or rear security should be provided for during the movement into the hostile area. Difficulty of control and other conditions will however, often make flank security difficult, but some form of flank security should exist even if it is only a few yards from the main body. Detection by the enemy may be prevented by keeping rifles loaded and locked during the movement, prohibiting smoking, restricting the use of lights, dulling or muffling shiny or noisy equipment, blackening hands and faces, and restricting the use of radios and pyrotechnics.

Equipment

The equipment used will depend on the mission and the size of the infiltrating force. A two to four-man patrol may carry only rifles or carbines and no communication equip-

The drawing of the battalion commander and the company commanders in the CP tent was done from a U.S. Army photograph by Pvt Bobby Ozment.

that depends on plain common sense

ment, while a larger force may be equipped with 60mm and 81mm mortars, machine guns, recoilless rifles and antitank and antipersonnel grenades. Large infiltrating forces would also need radios for control of the column in the approach march and the attack. Since all equipment must be hand carried, unnecessary articles should not be taken. Excess weight will delay the progress of the column and unnecessarily fatigue the soldiers.

Planning

A unit has been given the mission of attacking the rear or flank of an enemy position in conjunction with a frontal attack by a larger force. If the attack is to be at dawn, the infiltrators should have reached their concealed attack positions at least one half hour before dawn, so that they can complete their preparations under cover of darkness.

Before an infiltration on this scale, all officers should become familiar with the terrain and the plan of operation. A warning order should be issued early enough to allow small-unit commanders to make a reconnaissance and check equipment. An assembly area behind enemy lines should be designated. Friendly outposts through which the infiltrators are to pass must be alerted.

Rallying points between friendly and enemy outpost lines must be selected. Here units and groups will reassemble should they become scattered. If the plan is for different groups to use more than one route, an additional assembly area within hostile territory should be designated. This assembly area should be close to a prominent landmark that can be distinguished at night.

The plan for a large scale infiltration should be simple, detailed and carefully prepared. The plan must include provisions for: Formation and order of march; use of guides both in friendly and hostile areas; use of connecting files and security elements; detailed explanation of the mission and plan of operation; means of instant identification within the column; and the use of noncommissioned officers in the rear of the column to prevent straggling.

The rate of advance will depend on terrain, visibility and enemy activity. If enemy patrols are encountered, the column should either halt to allow the patrol to move by or immediately eliminate the patrol. Secrecy is more important than speed. Time allowances should be made to cushion unforeseen delays.

Conclusion

Although its uses are many and varied, infiltration is essentially a simple technique that depends more than anything else on plain common sense. From Biblical times until the present, clever infiltrators have defeated enemies superior in number and equipment. Every Infantry commander who learns and understands this technique will find that in combat infiltration pays high dividends.

Lieutenant Colonel Coleman, a 1952 C&GSC graduate, is now assigned to the Tactical Department at The Infantry School. During WW II he served with the OSS in North Africa and in the ETO. During the Korean campaign he served with the 8th Cav Regt as a Bn S3 and Bn executive officer.

keep them guessing

col gines perez

KEEP YOUR tactical thinking elastic," said the instructor.

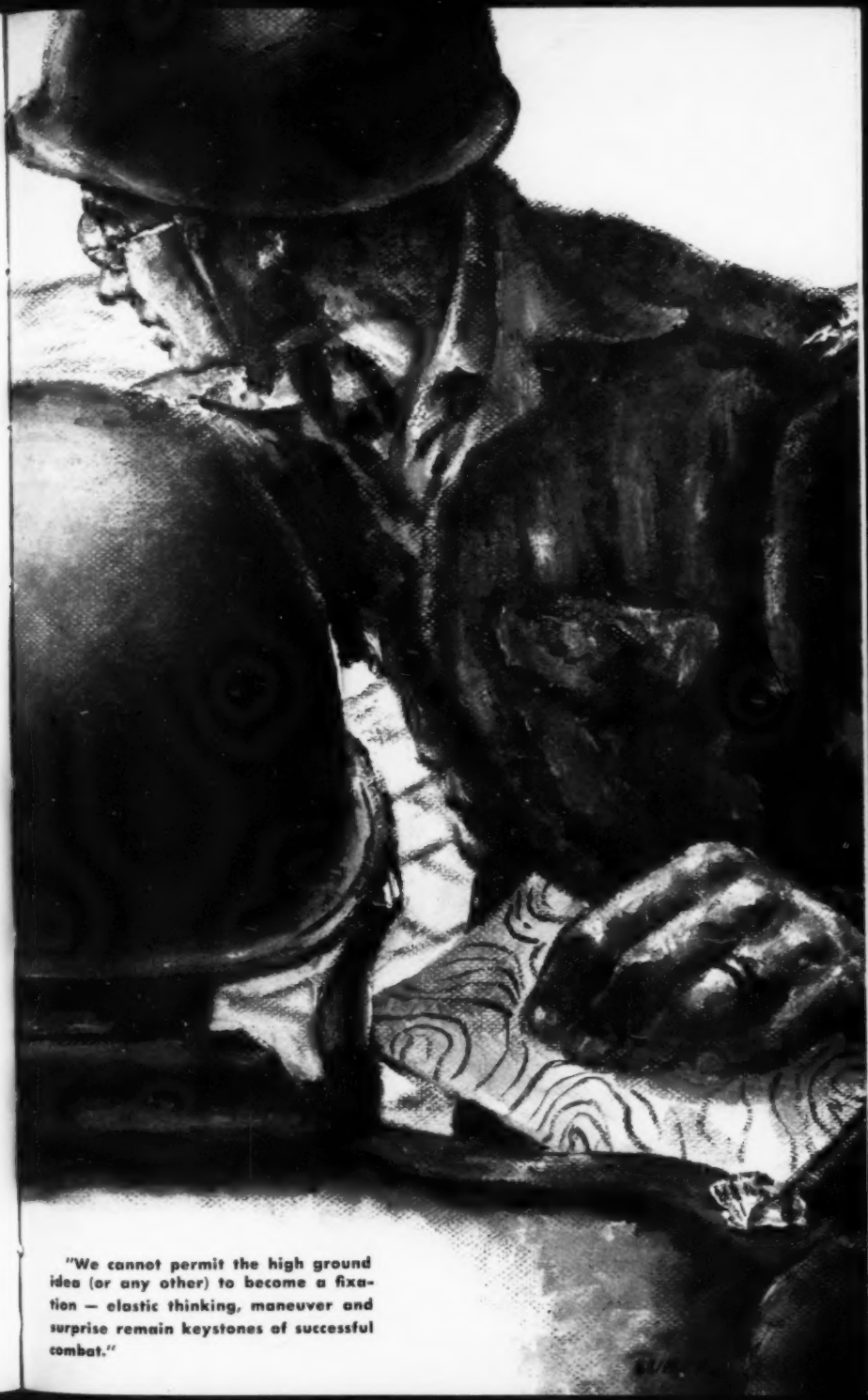
He held up a 2 x 2-foot schematic diagram of an Infantry battalion in defense. There was nothing unusual about it—just a plain black and white chart.

Then he repeated, "Keep your tactical thinking elastic," and gripping the chart firmly at each end he stretched the battalion out horizontally. Without speaking, he proceeded to change his grip to the upper and lower edges of the chart. He then stretched it vertically and concluded by pulling the chart from opposite corners.

Every one of his students recognized that this piece of overprinted rubber sheeting did more than demonstrate the versatility of the battalion. It emphasized the necessity for "Keeping our tactical thinking elastic."

This class was given shortly before World War II. While the visual aid showed the ability of a battalion to match and master terrain in the defense, the principle applies equally well to offensive actions. Almost every battalion or regimental action I have seen since then has made me think of that elastic chart.

During the first year of combat in Korea, I noticed two definite types of commanders. Both have a direct



"We cannot permit the high ground idea (or any other) to become a fixation — elastic thinking, maneuver and surprise remain keystones of successful combat."

bearing on this business of elastic thinking. They were:

1. **The Low Ground Advocate** — who was reluctant to use high ground. He lacked a sense of terrain appreciation and usually remained road-bound. This kind of thinking often resulted in a lack of leadership in that weapons and men could have occupied high ground in many cases, if they had been ordered to do so by their commanders. Needless to say, this state of mind lasted only a couple of months.

2. **The High Ground Advocate** — who got that way after several disastrous experiences in the lowlands. His inflexible views became so dominant that many commanders forgot the basic principle of fire and maneuver. Many commanders started attacking along ridge lines and were reluctant to abandon high ground once they had seized it.

The second state of mind was almost as dangerous as the first one. The enemy, as we might have expected, soon realized that we were ridge-bound and that we would almost invariably launch our attacks along high ground. Quite logically, he emplaced his weapons and dug his trenches to counteract this style of attack.

The following operation deals with my own unit, the 21st Infantry Regiment. We were by this time a veteran outfit, well seasoned in mountain warfare but like so many others, we suffered from an almost acute case of "state of mind number two." Just before this action the regiment had been in a defensive position on top of a ridge line.* The entire front had been stabilized since June. The regiments to our right and left were in contact with the enemy. Our new regimental mission was to attack and secure the ridge from objective 1 through 4 (see map).

The Enemy Situation. Detailed patrolling had revealed that the enemy had about one squad on Objective 1 and one platoon on Objective 3. (It was estimated that after the action began the enemy ridge defense was built up to approximately battalion strength). No information about Objectives 2 and 4 was available. Hill 851, the key terrain in the area, was known to be heavily fortified.

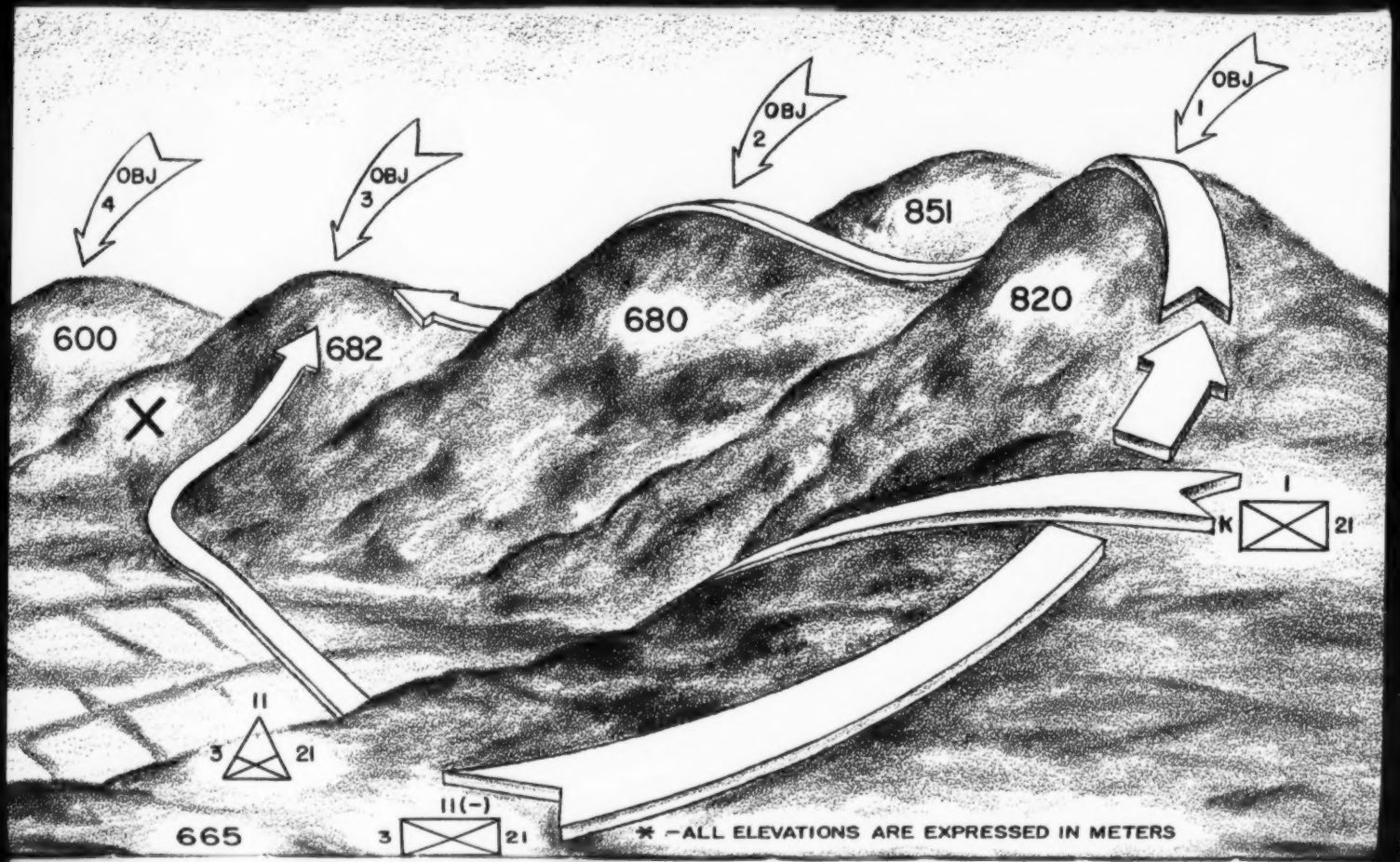
We estimated that the entire ridge from Objective 1 through 4 formed a well dug-in outpost line.

The Mission of the 3d Battalion was to seize Objectives 1, 2 and 3. The 1st Battalion was to pass through the 3d Battalion after the capture of Objective 3, secure Objective 4 and patrol the ridge line northward toward the Kumsung River. The 2d Battalion was in reserve. This, I believe, gives a fairly specific picture of what was to happen. Now let's see what **did** happen. (Note that at this stage the entire operation was to take place along the ridge.)

At about 0400, 12 July 1951, the 3d Battalion led off along the route of advance with L Company in the lead and I and K Companies following in that order. K Company was the reserve.

When we reached Hill 665, K Company was ordered to remain in this

* See "On Top of the Ridge Line," The Infantry School Quarterly, January 1953, Page 56.


OBJ
4
OBJ
3
OBJ
2
OBJ
1
851
820
680
600
682
X
I
K
21
II
3
21
II(-)
3
21
665
* -ALL ELEVATIONS ARE EXPRESSED IN METERS

vicinity and to follow Company I "on order." At first, things went smoothly. L Company easily seized Objective 1 and continued the attack toward Objective 2, supported by I Company. Before it could reach Objective 2, L Company came under intense fire from Objective 2 and long range fire from Hill 851. The fire continued, reducing L Company's progress to a snail's pace. At this point the 3d Battalion Commander, feeling that the momentum of the attack was lost, ordered I Company to pass through L Company and continue the attack.

K Company then received orders to move off the ridge line. They were to hold up on the valley floor and prepare to attack Objective 3 on order, using the route of advance shown on the map.

Meanwhile, I Company moved forward, but suffered so many casualties that the battalion commander began to doubt whether or not it could take the objective. Because of this reasonable doubt, he decided that he must commit his reserve if he was to accomplish his mission. So the battalion commander called me, appraised me of the situation, and stated that he was committing his reserve. He then ordered K Company to move across the valley floor, attack up the slope toward Hill 682, and secure the objective.

K Company immediately went into action. Objective 3 was placed under artillery and mortar fire and might well have been the reason the company received no fire while moving over the ridge into the valley. When the company reached the valley floor, it was annoyed by sporadic fire on the left flank from Position X. But this did not hold up the advance.

As they began to ascend the slope of Objective 3, the men noticed that the enemy seemed almost unaware of their presence. A fire fight started as they neared the top, but in a short time they had secured the objective. The uphill envelopment was a complete success.

I Company, of course, relieved of considerable pressure by K's success moved forward and made contact with K Company.

Afterwards we discovered that the enemy had built up his defenses solely to meet an attack from along the ridges. He had left his flanks exposed, with no prepared fields of fire and apparently no plans to counteract a "surprise" attack from this area.

* * *

I believe you will agree that this operation emphasizes the necessity for keeping our tactical thinking elastic.

It also taught us several specific things:

1. That the continuous use of ridge lines (or low land for that matter) soon leads the enemy to expect a set pattern of attack. Very

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Colonel Gines Perez is G3 of The Infantry Center. He served in the South Pacific during WW II and participated in the first six campaigns in Korea. He was an instructor at the C&GSC from 1946 to 1947. He graduated from C&GSC in 1948. Extensive combat experience as a commander in World War II and Korea confirmed the author's belief in keeping the enemy guessing.

easily he takes the measures necessary to defeat us.

2. That the enemy's action of preparing his defenses for only a ridge line approach, shows us that we must always be prepared to surprise him. We must not permit rigid thinking or any local precedent to destroy our flexibility.

3. That we must not overlook maneuver or surprise. While this operation illustrates an action that seemed unorthodox at that time and place, it embodied both of these desirable techniques.

There is much that can be said for using high ground in an attack. We cannot, however, permit the high-ground idea (or any other) to become a fixation. Commanders at all echelons must keep in mind that elastic thinking, maneuver and surprise remain keystones of successful combat.

'Star Unit' . . . the 124th Infantry

In 1884 Grover Cleveland was elected President of the United States; Isaac Murphy rode the three-year-old Buchanan to win the Kentucky Derby; in the same year Waterman invented the fountain pen and in the nation's capital work was completed on the Washington Monument.

It was in 1884 that in the growing state of Florida an Infantry Battalion was formed.

Men of this unit were to take part in the Spanish-American War, the 1916 Mexican Border incident, and, as the redesignated 124th Regiment, to fight in both world wars.

In this issue of the Infantryman's magazine we salute the 124th Infantry Regiment of the Florida National Guard—a 100 percent subscriber to THE INFANTRY SCHOOL QUARTERLY.

It was in the Second World War that the 124th distinguished itself in the battles for New Guinea, the Southern Philippines and Mindanoa.

The commanding officer of the 124th, Col Robert B. Harkness, a National Guardsman for 34 years, served as Inspector General of the 41st Infantry Division throughout the Southern Philippine campaign.

He assumed command of the 124th in 1952 and through his efforts has continued to keep the 70-year-old unit a proud member of the "Queen of Battles."

"THE QUARTERLY," Colonel Harkness writes, "has served a very practical and realistic purpose in keeping the Infantryman, regular or reserve component, abreast of the latest information . . ."

To Colonel Harkness and the men of the 124th we extend our appreciation and proudly add the unit's name to our growing list of Star Units: The 120th Infantry Regiment of the North Carolina National Guard, the 103d Infantry Regimental Combat Team of the Main National Guard, and now the 124th.

The New Operation Order

A good operation order must provide a simple system which conveys a commander's desire for accomplishing a given mission . . .

Capt James T. Root
and
Capt Bickford E. Sawyer

THE GERMAN "War of Liberation" had just begun. Two opposing armies faced each other on the outskirts of a small German town. One of these armies was commanded by the Emperor, Napoleon Bonaparte. Shortly after the battle started, the Emperor sent a pencil-written note to Marshal Ney which read: "Be in the town of Preititz by 1100, attack the enemy's right flank." Ney, who had been pushing the enemy back all morning, received the note at 1000, just as he was entering Preititz. Since he was not expected to be there until 1100, Ney immediately stopped his attack and established himself in the village. By the time Ney resumed his attack at 1100, the enemy had been greatly reinforced and the chance to envelop their army completely and deal it a decisive defeat had slipped out of Ney's grasp.

From the very beginning of this operation Ney was unfamiliar with Napoleon's over-all battle plans. He was only vaguely acquainted with the location of Napoleon's main forces and the disposition of the enemy. Although he was supposed to execute the main attack—an envelopment upon which the success of the entire operation hinged — Ney was never given a definite objective which

writing is a task that must be mastered to perfection

would place his army in rear of the enemy. Napoleon's order had failed to give Marshal Ney details of the whole operation. The Marshal, therefore, had missed the object of the maneuver he was supposed to perform.

Had Napoleon issued his instructions to Marshal Ney on a clear, detailed operation order which included his over-all battle plan, it is very likely that Napoleon's orders would have been easily understood and successfully carried out.

A good operation order must provide a simple system which conveys a commander's desires for accomplishing a given mission to his subordinates as well as give the person receiving it the opportunity to comply not only with the **letter** of the order but also the **spirit.**

Also, it must be able to keep pace with the changes in organization, tactics, weapons and equipment.

Editor's Note: The new operation order is being taught at The Infantry School. Field manuals 7-10, 7-20 and 7-40, currently under revision, also will contain information about it.

The aim of the new operation order, which this article introduces for the first time, is to fulfill these characteristics.

In general, the new order parallels the old format, but contains many changes which will directly affect the Infantry unit commander. Some of the controversial items in the old form have been simplified and the order has been made easier to read by eliminating most of the abbreviations.

The following discussion presents the new operation order in detail as well as the techniques used in it.

Security Classification (See fig. 1A). Place the appropriate classification, such as "TOP SECRET, SECRET, or CONFIDENTIAL" at the top and bottom of every page as prescribed by AR 380-5.

Changes from Oral Orders (See fig. 1B). Insert this item in parenthesis directly under the classification. Use this space only in the event you have previously issued oral orders regarding this operation and this order either confirms or changes these oral orders. In the case of change, write a statement, such as "no change from oral orders except the attachments of 2d Plat, Tk Co, to 1st Bn."

new operation order . . .

Copy Number (See fig. 1C). Allot a copy number to each copy of an order and maintain a record showing the specific copy number issued to each addressee. Enter this information in handwriting when the copies are ready for distribution. Enter in the following manner: Copy No. 3 of 12 copies.

Issing Headquarters (See fig. 1D). Place the unit designation in this space. It should be an entry, such as "85th Inf" or "Co A, 85th Inf."

Place of Issue (Fig. 1E). Record the location where the order will be issued in this space. This may simply be a grid coordinate location, the name of a town or locality, or a combination of the two. You may use a coded location, provided no other identification of the location, uncoded, is used.

Date/Time Group (Fig. 1F). Indicate here the date and time the order is signed. The date/time group always includes the date, time, month and year. Write it in the following manner: "011745 Jun 60" or "281600 Dec 54," etc. The date/time group means the date and time at which the order is signed and is effective, unless you state otherwise in the last subparagraph of paragraph 3 of the body of the order.

Message Reference Number (fig. 1G). The message reference number consists of letters, numbers, or a combination of letters and numbers. It in no way refers to the fact that it is connected with the operation order. By using the message reference number, a person receiving the order can acknowledge it over a radio and in the clear, without the possibility of the enemy learning that an operation order has been issued. It is not required, nor is it considered advisable, to have any continuity with or similarity to the message reference numbers of successive orders. Place the number on all copies at the last moment before distribution, in order to maintain security. The message reference number has no connection with the Unit Message Center. It is a number assigned the order by the originator. Examples of possible reference numbers may be BQR, 4826 or 353D.

Type and Serial Number of Operation Order (fig. 1H). Spell out the title completely (i.e., Operation Order 12) rather than using abbreviations (i.e., Opn O 12). Number operation orders consecutively, beginning with each calendar year.

References (fig. 1, I). Under this heading list the relevant maps, charts, aerial photographs, sketches, etc., which are needed by the persons receiving your order. When the reference is to maps, the heading "Reference" may be changed to "Map,"

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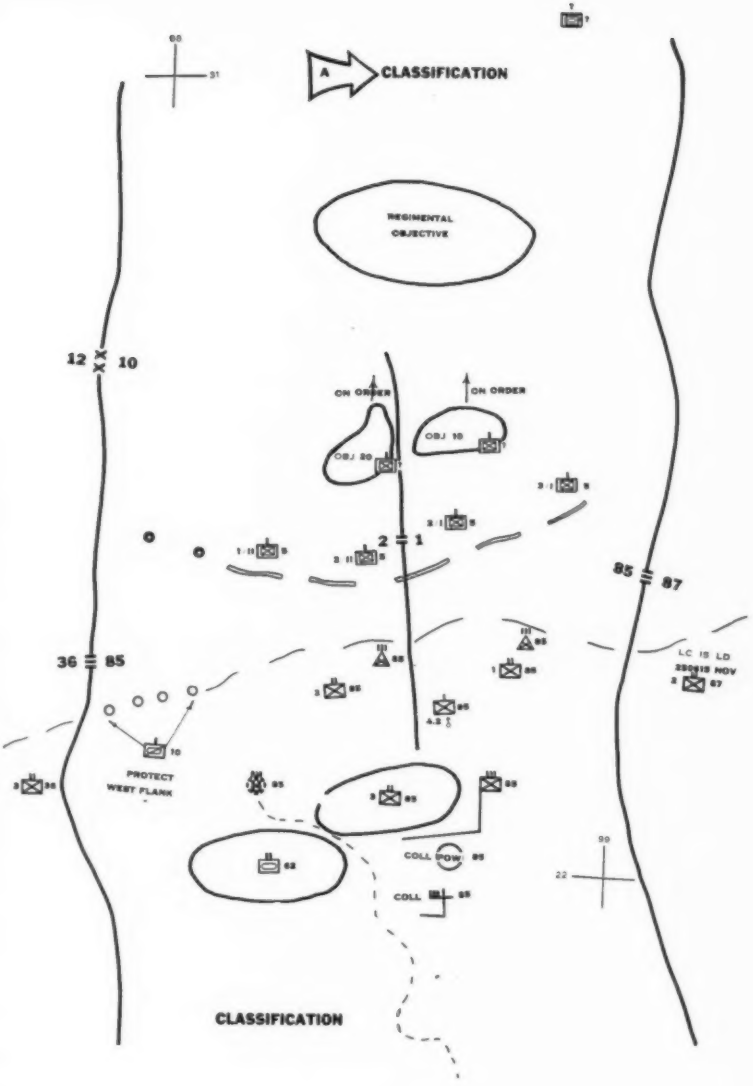
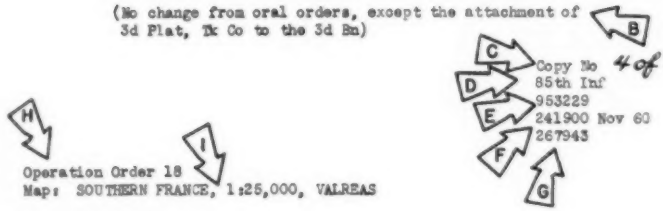
Figure 1—The overlay-type operation order is found on pages 4, 5 & 6.


A
CLASSIFICATION
REGIMENTAL OBJECTIVE
12 10
ON ORDER
ON ORDER
OBJ 20
OBJ 10
2 1
36 85
85 87
PROTECT WEST FLANK
COLL POW
COLL
LC IS LD
CLASSIFICATION

EXAMPLE

OVERLAY-TYPE OPERATION ORDER REGIMENT IN THE ATTACK

(No change from oral orders, except the attachment of 3d Plat, Tk Co to the 3d Bn)



Copy No 4 of 15 copies
85th Inf
953229
241900 Nov 60
267943

Operation Order 18
Map: SOUTHERN FRANCE, 1:25,000, VALREAS

1. SITUATION

a. Enemy Forces:
   (1) Units now in contact estimated 75% strength in personnel and equipment.
   (2) Enemy can reinforce with armored units of unknown size from vicinity 958316 within 15 minutes.
   (3) Indications are enemy will continue defense.

b. Friendly Forces:
   (1) 10th Inf Div continues attack 250615 Nov to seize high ground west of ST BLOIS (9308).
   (2) 87th Inf attacks 250615 Nov to seize BERNARD (0034).
   (3) 36th Inf attacks 250700 Nov to seize ROMILLEY (8231).
   (4) 25th FA Bn direct support 85th Inf.
   (5) 35th FA Bn reinforces fires 25th FA Bn.
   (6) 85th FA Bn general support 10th Inf Div.
   (7) Co A, 41st Engr C Bn supports 85th Inf.
   (8) Twelfth TAF supports.
   (9) Annex A, Fire Support Plan.

c. Attachments and Detachments:
   (1) 62d Tk Bn attached 242400 Nov.
   (2) Btry A, 43d AAA AW Bn attached 241800 Nov.

2. MISSION

85th Inf (reinforced) attacks 250615 Nov to seize ST PAUL TROIS CHATEAUX (9330) continues attack north on order.

3. EXECUTION

a. 85th Inf attacks initially with 1st and 2d Bn abreast to seize OBJECTIVES 10 and 20. 62d Tk Bn (reinforced) attacks in west of regimental zone; seizes regimental Objective from west.

b. 1st Bn:
   Attached: 1st Plat, Tk Co, 85th Inf.
   2d Plat, Btry A, 43d AAA AW Bn.

c. 2d Bn:
   Attached: 2d and 4th Plat, Tk Co, 85th Inf.
   2d Plat, Btry A, 43d AAA AW Bn.

d. 62d Tk Bn (upon attachment):
   Attached: Co I, 85th Inf, effective 242400 Nov.
   On order attack on axis BOLLENE (9223) - PONT DE COUCAOU (9025) - ARMAND (9029) to seize regimental objective from west. Continue attack north on order.

e. Hv Mort Co:
   (1) General support
   (2) Initial targets known enemy positions on OBJECTIVES 10 and 20.
   (3) Annex A, Fire Support Plan.

f. Tk Co, 85th Inf:
(1) Attach 1st Plat to 1st Bn.
(2) Attach 2d and 4th Plat to 2d Bn.
(3) Attach 3d Plat to 3d Bn.
(4) Co (-): Regimental control.

g. I & R Plat:
Maintain contact with 87th Inf.

h. Btry A, 43d AAA AW Bn:
(1) Attach 1st Plat to 1st Bn.
(2) Attach 2d Plat to 2d Bn.
(3) Btry (-): Regimental control.

i. Regimental Reserve: 3d Bn:
Attached: 3d Plat, Tk Co, 85th Inf.
(1) Attach Co I to 62d Tk Bn 242400 Nov.
(2) Prepare plans to assist either attack battalion with priority to 1st Bn.
(3) Protect regimental east (right) flank with not to exceed one reinforced platoon.

j. Coordinating Instructions:
(1) Contact from left to right.
(2) Annex A, Fire Support Plan.

4. ADMINISTRATION AND LOGISTICS: M
a. Kitchen trucks released to 3d Bn 242100 Nov.
b. One ammunition vehicle of Tk Co section released to each attack battalion 242100 Nov.
c. 62d Tk Bn replenish POL at Army Class III Supply Point.
d. Regimental trains area and ammunition distribution point located vicinity 968182.

5. COMMAND AND SIGNAL N
a. Index 1-8, SOI.
b. Report CP locations.
(Acknowledge over wire circuits only) O

THOMPSON P
Col

ANNEX: R A. Fire Support Plan Q

DISTRIBUTION: A

OFFICIAL:

S

SELLERA
S3

followed by the country or geographical area, the scale, and the number or name of the sheet. In the event there are no references to be listed, insert the word "Nil" after the heading.

Time Zone Used Throughout the Order. At regimental level this will have little application. Omit this item unless your unit will execute the order in a different time zone from the time zone in which the order is issued.

Task Organization. This item is not changed from present operation order form. Use it when a task organization will be so complicated that it is cumbersome to list it under the appropriate unit in paragraph 3. Normally, you must show the simple attachments to a unit below the unit designation in paragraph 3.

BODY

General. The body consists of five main paragraphs. Each paragraph will be given a heading and will be written in capital letters. All subparagraphs of paragraph 1 are given headings. Only the initial letters of the words in the headings of subparagraphs are capitalized. Headings will not be underlined.

Paragraphs 1, 1a, 1b, 1c, 2, 3, 4 and 5, with their corresponding headings, always appear in the order. Use such terms as "no change," "see overlay," "See Annex . . ." and "Nil" (meaning no information to enter) in order to maintain the integrity of the paragraphing and the brevity of the order.

Spell out all words used in writing the order, with the exception of the date/time group and unit designations such as "10th Inf Div," "85th Inf," "Co A," or "62 Tk Bn." **When an allied unit is attached or involved in the operation, the date/time group and unit designation must be spelled out.**

There is no hard and fast rule regarding abbreviations. The reader should not have to memorize the regulations on abbreviations, but should be able to clearly understand the order. It is considered that the above abbreviations are common enough to be readily understood. Others such as mm (millimeter) and the like are also appropriate. In order to avoid cluttering the overlay, abbreviations should be used on overlays wherever possible.

Situation (fig. 1, J). Paragraph 1 always has three subparagraphs: "Enemy Forces," "Friendly Forces" and "Attachments and Detachments." (Paragraph 1d, "Assumptions," will be added in the case of operation plans.) Give a brief description of the general picture under the subparagraphs indicated in order that

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Captains Root and Sawyer are both 1945 graduates of the U.S. Military Academy and are both presently assigned to The Infantry School. During the Korean conflict, Captain Root served as a Company Commander with the 5th RCT and Captain Sawyer served in the same capacity with the 23rd Infantry. Both are graduates of the Infantry Officer's Advanced Course and both are qualified paratroopers.

your subordinate commanders will understand the current situation.

Enemy Forces—There is no change from the present methods of listing enemy information. Include such items as composition, disposition, location, movements, estimated strengths, identifications and capabilities.

Friendly Forces — This subparagraph includes information of the next higher unit, adjacent units, and those units supporting the operation which may affect the action of your subordinate commanders. List the friendly forces in the order shown above.

Attachments and Detachments — When not given under task organization, list here those units attached to or detached from your unit for this particular operation. Also show any existing attachments to or detachments from your unit. Include the effective time the attachment or detachment is made. Examples: "62d Tk Bn attached effective 162400 Nov 60;" "62d Tk Bn detached effective 181200 Nov 60." Consider those units under "Operational Control" as attached for order purposes, and treat them in the same manner as attachments. The addition of this subparagraph to the new order does not eliminate the necessity of again directing the attachment to, or detachment from, a subordinate unit in paragraph 3 under the same requirements as in the present operation order form.

Mission (fig. 1, K). There are no subparagraphs in this paragraph. Write in this paragraph only a clear, concise statement of the task of the unit and its purpose. This may be an exact reproduction of the mission given unit by the next higher headquarters.

Execution (fig. 1, L). There are no restrictions as to the number of subparagraphs in paragraph 3.

In the first subparagraph give a brief summary of the operational concept. This summary should be as brief as possible.

Handle subsequent subparagraphs in the same manner as in the present operation order, except for the following:

1. The title of the reserve subparagraph, which has been underlined in the past, is not underlined (i.e., Regimental Reserve: 3d Bn).

2. If desired, place tactical instructions to two or more units in a final subparagraph headed "Coordinating Instructions." If used, include in this subparagraph all of those items of coordination formerly appearing in subparagraph 2*b* of the old order format, and those tactical instructions to two or more units formerly appearing in subparagraph 3*x* of the old order. Give this subparagraph the next letter in alphabetical order that logically follows.

Administration and Logistics (fig. 1, M). There are no restrictions as to the number of subparagraphs in paragraph 4. The contents of this paragraph are not changed from the present form. As before, if lengthy, you may include these instructions in an annex and refer to the annex in paragraph 4. You may also make reference to current in-

structions even though they may not be attached as an annex.

Command and Signal (fig. 1, N). There is no limit to the number of subparagraph in paragraph 5; however, at regimental level, only subparagraphs a. and b. are required. If subparagraph a., include signal matters, and in subparagraph b., include command matters.

Acknowledgment Instructions (fig. 1, O). Place these instructions under the final subparagraph of the order and neither give them a heading, a paragraph number, nor letter them as a subparagraph. You may list detailed acknowledgment instructions or simply the word "Acknowledge." Acknowledgment will be given using the Message Reference Number, unless otherwise directed. Always inclose acknowledgment instructions in parenthesis.

ENDING

Signature of Commander (fig. 1, P). There is no change from the old format. The original must bear the last name, signed, of the commander and will be the file copy. All other copies will be authenticated by the S3 and the commander's last name typed above his rank.

Annexes (fig. 1, Q). There is no change from the present technique of listing annexes. All annexes to operation orders are **lettered**, rather than numbered. Give annexes the same heading and ending as the operation order, except when writing the title of the annex.

Distribution (fig. 1, R). List the word "DISTRIBUTION" as in the present form. If the distribution includes any allied unit, write out the entire distribution list. If the distribution list does not include allied units, nor the order involve inter-allied use, the distribution code, as established by the unit SOP, may be used. In the latter case, use some such statement as "DISTRIBUTION: A."

Authentication (fig. 1, S). All operation orders, other than the original, bear the signature of the unit S3. The word "OFFICIAL:" appears above and to the left of the written signature of the last name of the S3. The last name only of the S3 appears, typed, under his signature. The title "S3" appears below the typed name of the S3.

TIPS ON TECHNIQUES

In the preparation of orders, the difference between a well written order and an average order lies in the "Tricks of the Trade." Listed below are some of the details which you should understand before writing an order.

1. Always include the year of the date/time group in the heading, but you may omit the year in the remainder of the order, unless the year changes.

2. Write the order in the present tense.

3. Use short positive statements. They need not be complete sentences if the meaning is clear.

4. The grid coordinates, in conjunction with the location of a town, hill, or the like, need only be given once. This will be the first time reference to the location is used. There-

after, give only the location, by name.

5. Place a colon after all subparagraph headings and list the first word of the information to be listed under the subparagraph on the next line and indent the first letter of the first word three spaces from the first letter of the heading. All subsequent lines begin directly under the first letter of the first line.

6. Always inclose the word "reinforced" (used to indicate that a certain unit has some additional attachments) in parenthesis.

7. If an attachment or detachment has been made between orders, mention that fact, together with the effective time, in subparagraph 1*c*, (Attachments and Detachments) of the next order issued.

8. If a unit will participate in the operation, but will not be attached until after the operation order is published, show the attachment, with the effective time, in paragraph 1*c*. In paragraph 3, you may give the unit a mission, but place the phrase "(Upon Attachment)" immediately after the unit designation.

9. The abbreviation "Co (—)" implies the mention of the unit designation and may therefore be abbreviated.

10. List annexes in the same sequence they were mentioned in the body of the order, and letter them alphabetically, beginning with "A." For example, if the intelligence annex is the first annex mentioned in the body of the order, it is designated "Annex A, Intelligence." Reference to an annex is made in order to direct the reader's attention to it. Reference to annexes is made in subsequent paragraph and subparagraphs whenever deemed necessarv.

11. List annexes in the body of the order as "Annex A, Intelligence," but list them in the ending as "Annex: A. Intelligence."

* * * * * * *

Always assume that an order which can possibly be misunderstood will invariably be misunderstood. Writing orders is one of those detailed tasks which must be mastered to perfection . . . and must be as automatic as wearing the uniform properly. As Napoleon learned, the simplest order sometimes has a way of confusing subordinates.

We have given you the details and techniques to be followed in using the **new** operation order . . . it is your job to know them . . .

Reprints

Civilian and military publications desiring to reprint articles appearing in The Infantry School Quarterly may do so by first obtaining permission of The Infantry School Quarterly.

assets

is your company running in the red ?

debts

an Infantry company is a big business that should show the stockholders a profit in protection

RECENTLY, a reserve captain was recalled to active duty as an Infantry company commander. The captain was concerned about losing valuable executive experience and longevity in the civilian corporation where he had been a section manager. He was also distressed about his assignment as a rifle company commander, a position which has no civilian equivalent and, therefore, he thought, was of no advantage to his civilian career. The captain wanted a semi-military assignment, a job like Post Exchange or Commissary Officer, where he could get experience managing an expensive business. At least he wanted to shuffle papers on a staff job where executive talent was needed. In the civilian corporation he had managed a department which averaged a monthly gross of over $50,000—a far cry from running a little rifle company!

The captain did not realize that as a rifle company commander he would be the custodian of a bigger business than he ever managed as a civilian. His monthly pay check deceived him, for it certainly did not reflect an increase in responsibility.

As civilian manager of 30 people he had received almost twice the pay he received as a captain. But from a capital assets standpoint the facts are clear: The company or battery commander is the president of an expensive business in which the

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The author is now serving with H/S company, 42d Armored Inf Bn, 2d Armored Division in Europe. He received his reserve commission from OCS in 1945. He later attended the U.S. Military Academy and received his regular Army commission in 1950. A qualified paratrooper, he served with the 508th RCT from 1951 until 1952.

American taxpayers, the stockholders, have a heavy investment.

And more important than the financial consideration is the company commander's moral responsibility for the lives of approximately 200 men, a responsibility which definitely stamps "Big Business" on the company-size unit. There can be no financial value placed on that moral responsibility, nor can any civilian business responsibility be compared to it.

The commander of a company-size unit, like any up-and-coming corporation executive, should know the economic background of his business. Civilian executives who are incapable of quoting operating costs for their departments are scarce. But how many company commanders can quote the costs of the military business they are running?

The data shown on p. 41 is for three of the most important combat companies, the rifle company, light field artillery battery and tank company. The figures are for full strength companies and are based on the Divisional Tables of Organization and Equipment, dated 15 May 1952; 7-17 Infantry Rifle Company; 6-127 Field Artillery Battery 105mm Howitzer Towed; and 17-37 Tank Company Heavy and Medium. All of the financial data was published in September 1952 by the Department of the Army.

Before studying the facts outlined below it is important that we realize that there are many dollars-and-cents costs that cannot be estimated accurately even in a comprehensive study. It is difficult, for instance, to make an accurate estimate of the value of the retirement pay or the veterans' benefits of the men who serve in a company. No such figures are available, but they would be large and very important in the long-range financing of a company-size unit.

Nor is the expense of training the officers, noncommissioned officers and specialists of the company listed. It is difficult to estimate what should be charged one company as its cost percentage liability of the U. S. Military Academy; the Armored, Artillery or Infantry Schools; Senior and Junior ROTC courses; and the hundreds of enlisted specialist's courses and schools which are needed to train adequately the cadre of any company.

Since many such intangibles cannot be considered or accurately itemized on the company level, the total given here can be considered conservative.

In making a financial inventory of any business, whether a hot dog stand or a factory, we should first consider the activation cost, which is the initial capital output necessary to get the business going. For the company-size military business, the activation costs shown below are itemized by the technical services that maintain the property.

The initial cost for uniforming the men is also estimated. Not included is the company's share of the research and development expenses before any equipment can be standardized. It is difficult to draw a civilian comparison to this R&D cost. Few

businesses have to foot the bill for research of such items as the new M48 "Patton" tank, the Garand M1 rifle, or the new AN/PRC 6 radio, although many of the larger corporations run experimental laboratories.

Although these figures are exact, they must be considered only approximate, owing to constant fluctuations in prices and to many intangible costs, some of which must be estimated on a world-wide basis. The figures show the military capital assets of the business. No initial output for land or building is given, as it would be in a civilian business. Since the company might move anywhere in the world and might be quartered in anything from pup tents to the best modern barracks, it is difficult to include quarters in the activation costs. Quartering costs are estimated below on a monthly basis. These activation figures assume that the troops are sleeping in tents and using slit trenches.

The chart on page 42, "Activation costs, monthly maintenance in Peace Time" shows how much it costs to run this business for one month.

To arrive at this data the Department of the Army was required to make many estimates and averages. The pay estimate includes basic pay for both officers and enlisted men, and a pro rata share of dependency benefits. Recent experience in Europe has provided all the Quartermaster data, while the replacement figures are EUCOM peacetime rates. The clothing prices are taken from ap-

ACTIVATION COSTS

	Infantry T/O&E 7-17	Artillery T/O&E 6-127	Tank T/O&E 17-37
Cost of Initial Allowance of T/O&E Equipment by Technical Service:			
Chemical	3,398.70	2,167.20	2,520.55
Engineer	3,876.42	458.45	379.64
Medical	43.31	31.21	34.73
Ordnance	69,167.00	296,770.00	5,067,734.00
Quartermaster	8,000.00	6,000.00	7,000.00
Signal	3,690.27	11,646.31	97,591.82
Initial Clothing Allowance:	34,603.27	20,922.11	24,899.04
Total Initial Equipment Cost	**122,238.97**	**337,995.28**	**5,200,159.78**

MONTHLY MAINTENANCE IN PEACE TIME

	Infantry T/O&E 7-17	Artillery T/O&E 6-127	Tank T/O&E 17-37
T/O&E Replacement:			
Chemical	64.20	48.15	48.15
Engineer	102.07	6.37	7.30
Medical	.....	.....	.....
Ordnance	513.00	1,743.00	26,585.00
Quartermaster	400.00	300.00	350.00
Signal	108.43	289.56	1,155.92
Expendables Consumed:			
Chemical	5.46	3.26	5.04
Engineer	.....	.....	.....
Medical	6.61	4.10	4.89
Ordnance	670.00	2,465.00	47,770.00
Quartermaster	500.00	300.00	360.00
Signal	153.20	153.86	86.65
Petroleum, Oil, Lubricants at Current EUCOM Experience:	200.00	400.00	2,300.00
Ammunition			
Training	1,973.00	20,335.00	15,065.00
(Combat)	(20,635.00	(247,794.00	(199,700.00)
Subsistence at $1.36 per ration:	8,037.60	4,936.80	5,875.20
Pay	32,880.00	22,770.00	27,340.00
Clothing Maintenance	1,063.80	653.40	777.60
Estimated Monthly Cost of Housing, Training and Overhead of Army proportional to unit strength (1952)	40,613.00	26,279.00	32,561.58
ESTIMATED TOTAL OPERATING AND MAINTENANCE COSTS (Peace)	**$87,290.37**	**$80,687.50**	**$160,296.04**

plicable Special Regulations and Department of Defense Directives.

Naturally, the amounts of petroleum, oil and lubricants depend on the distance the vehicles are run, so only average figures can be used. Ammunition expenditures are given as averages, both for peacetime and combat. Under unusual circumstances the costs might vary greatly from month to month.

The total monthly operating and maintenance figures shown above are even more interesting when considered from a profit and loss angle. In civilian business a profit would be accrued each month only if the gross income in sales or production surpassed the operating and maintenance expenses. For example, if the tank company were a civilian business it would have to gross $160,296.04 every month just to keep from running in the red. And, even then, the tank company would not be able to repay the stockholders one cent on their investment. It would not be a sound business if it could not make a profit.

And remember, the monthly operating figure of $160,296.04 does not include the percentage of the activation cost of $5,200,159.78 which in any civilian business would certainly have to be amortized in some manner over a period of time. That five million plus, would probably have to go down as a part of the monthly operating expense if the business were ever to pay for itself.

Unfortunately, the tank company or, for that matter, any military organization, from the lowest squad to the entire U. S. Army, will never be a paying business. The only way that any military business can ever show any sort of profit to its stockholders, the citizens of America, is to give them protection, either in combat or in a cold war, in return for their financial input.

This military profit can be a moral, psychological or physical, but never financial return for the investment. The only purpose of our military is to repay the people who invest in it with the "profit" of allowing them to live by the ideals in which they believe: Life, Liberty and the Pursuit of Happiness.

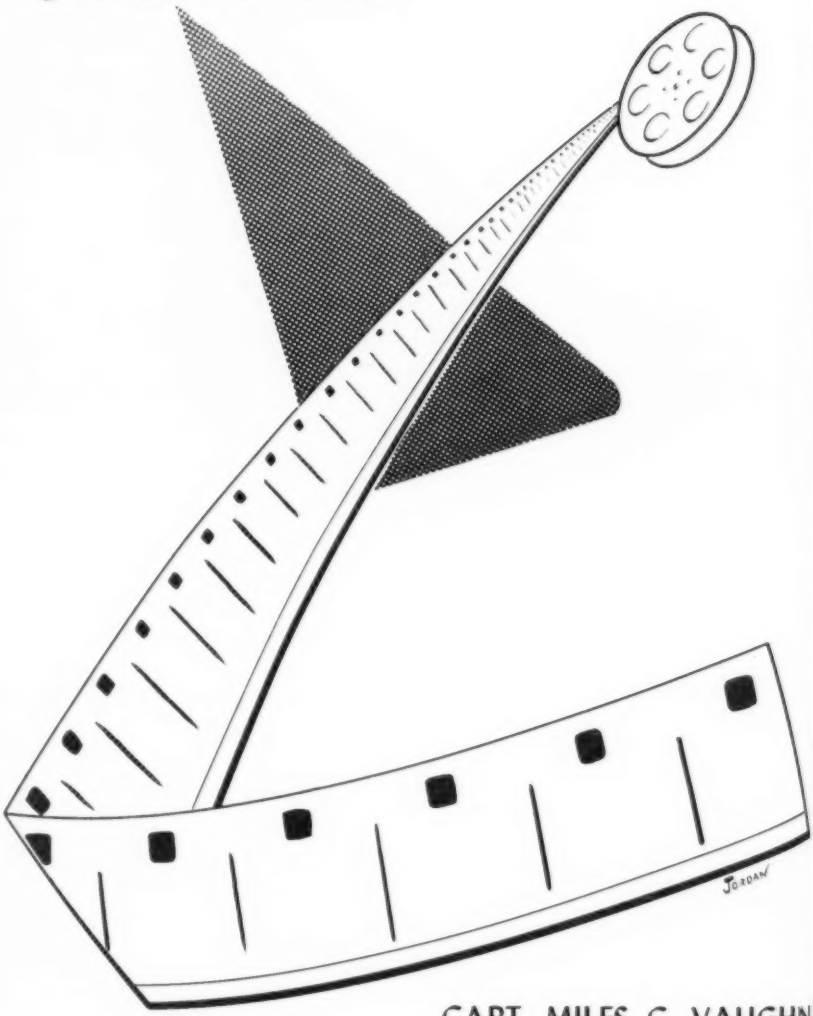
As the Army letter on this subject stated, "A company or battery calls for the highest type of managerial ability and for leadership which will insist that the company's capital assets provide the optimum benefits through a maximum period of economical usage. In the aggregate, the margin between poor and good management at the company level can have a critical impact on the capabilities of the United States to provide the proper support of our armed forces and aid our allies to support us."

Is your company running in the red?

TRAINING PROBLEMS

When you have a training problem or need instructional material write The Book Department, The Infantry School, Fort Benning, Georgia. They will be happy to get you the material or let you know where it is available.

Small Arms Movie



CAPT. MILES C. VAUGHN

You don't have to be an experienced photographer to make a training film . . . here's how to do it!

THERE IS nothing new about using movies as training aids. But how many instructors have ever considered making training movies themselves? It is a lot easier to do than you may think, and the advantages, as I will show, are numerous.

In the spring of 1950, I organized a small arms committee for the 87th Infantry at Fort Riley, Kansas. My immediate problem was to teach the assembly, disassembly, nomenclature and functioning of the M1 Rifle to 200 new men every week.

To assist me I had only six enlisted assistant instructors whose sole military experience was basic training. Teaching these instructors the subject as well as methods of instruction was a frustrating task, since they were continually being replaced by other men who also needed training. In addition, the only classroom available was a long narrow building unsuitable for teaching a subject in which small parts had to be shown the students.

I tried to solve the problem by stationing the assistant instructors on raised platforms along the sides of the room. Each one of them performed the assembly and disassembly for 34 men. But the students still could not see clearly the small parts or the details of the operation.

The answer, of course, was a movie. But when we looked, we found that no movie existed on assembly and disassembly of the M1. Then I had the idea of making my own movie to suit my own needs.

Since this subject has to be taught slowly, step by step, a continuous movie would run too fast to be of any value. If we stopped it in the middle we would lose part of the next step. On the other hand, using a separate movie for each phase would be impractical.

Our solution was to have one movie, with blank strips of film inserted between each phase of the assembly and disassembly. In this way, the film could be stopped for the students to do practical work in the phase just shown.

I think it is wise at this point to say that I am not an experienced cameraman. A few months before the small arms movie came into being I had purchased an 8mm camera. Perhaps an account of exactly how we went about filming the picture

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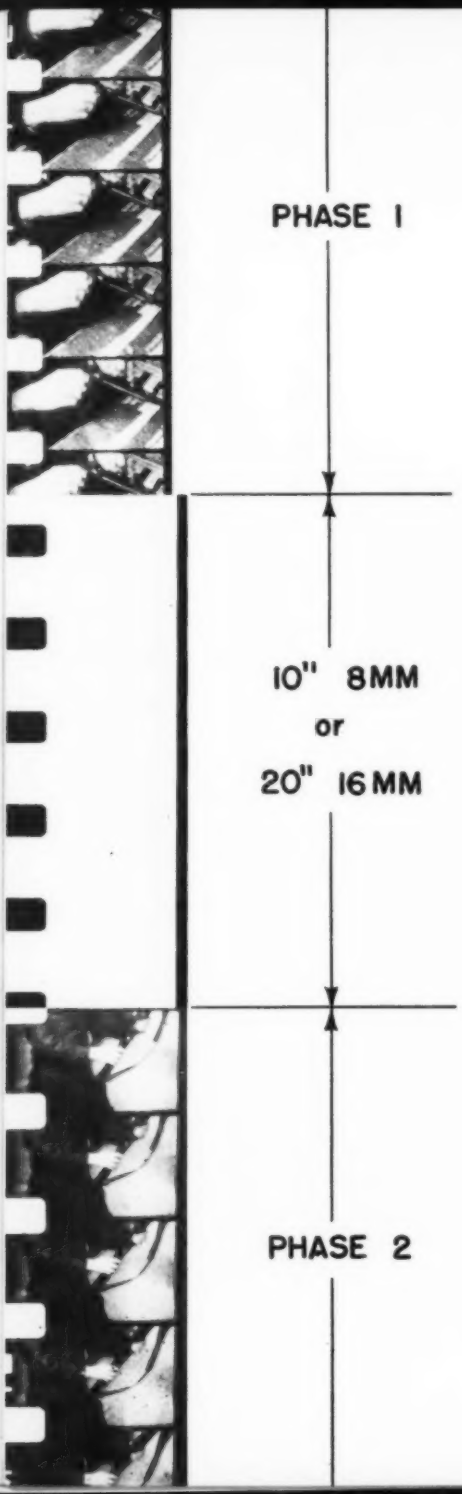
During a tour of duty at Fort Ord the author developed the training aid described in this article. Capt Vaughn was commissioned via OCS in 1944. He served in Korea Jan-Nov 1951 as a company commander, and later as an S4 (38th Infantry Regt). The author is currently an instructor at The Infantry School.



will convince instructors that it is not a difficult job that requires "camera" experience.

Using this camera and $5.35 worth of film we spent two hours a day filming the movie and finished it in a week. The only props used were a table, a cloth assembly chart and a clean M1 rifle. A light colored wall was used as a back-drop. Our "actor," who was to perform the assembly and disassembly, was the most competent man we could find. His uniform was neat and correct, his hair trimmed, and his hands and fingernails clean. They may seem trivial matters, but they are not. Any flaws in the demonstrator's bearing or appearance will draw the students' attention away from the operation that he is performing.

A few words about the technical aspects of making the film: 90 per cent of the shots taken were closeups, some as near as 3 inches. These closeups are made in the following manner: First measure the distance between the subject and the camera lens, then consult the lens chart that comes with the camera for the proper diaphragm setting so that the camera is in focus at that distance. Finally, place your exposure meter in front of the subject and move your lights around until you get the correct reading on the meter. Now you are ready to begin shooting.

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a. We cut the film at the end of each sequence and spliced blank film onto it.

It is best to use only artificial light.* Natural light is not only undependable, but cannot be focused to suit your needs. We used two large photo floodlights to illuminate the area of the subject and one spot flood to highlight closeups.

Before you actually begin filming the picture, you will need four or five rehearsals to make sure that everything goes smoothly. These rehearsals should be run in conjunction with the narration. The instructor should speak as if he is present-

* Lights were all borrowed from the Signal Corps.

Our "actor," who was to perform the assembly and disassembly, was the most competent man we could find.

ing the conference to a live class. In this way, coordination between the narrator and the demonstrator will be assured. Since this is not a talking film, the instructor has to be in complete charge of the movie presentation.

In the actual showing of the movie, the instructor can ensure good coordination by using a double-throw switch on the speaking platform. An engineer can quickly install this—all you need do is tell him what you want the switch capable of doing. The best method is to have the lights on and the movie off when the switch is in position one, and the movie on and the lights off when the switch is in position two.

We cut the film at the end of each sequence and spliced blank film on to it (see illustration A). We found that for 8mm film, 10 inches of blank film were needed between each sequence. Twenty inches were required for 16mm film. We also found that it was a good idea to wet the emulsion side of the blank film and scratch on it the title and number of the sequence that followed.

We began the movie with a medium range shot (about six feet away from the camera) of the demonstrator standing behind the table. He rotated the rifle so that the sights were down, and pointed out the trigger housing group. Then the camera moved in for a one-foot closeup as the demonstrator removed the trigger housing group. All his actions were slow and deliberate. Then the camera moved back to a range of six feet as he placed the group on the disassembly chart.

This procedure was used throughout the movie. Every action was performed in what almost amounted to slow motion, so that the students would thoroughly understand every phase of the operation. After each phase, the film was stopped, the lights turned on, and the students talked through the step just shown on the movie. Whenever necessary, a phase was shown over before beginning the next phase. Meanwhile the assistant instructors walked around the room and assisted anyone who was having difficulties.

This "sequence" movie really solved our training problems. I believe it can solve similar ones for you. There is, I feel, a real future for the homemade movies. It may well prove of particular value to training divisions, Reserve, ROTC and National Guard instructors.

This training aid doesn't need to be limited to small arms instruction. It can be used in many cases where there is a shortage of assistant instructors or where these instructors lack training. The sequence movie cuts preparation time and assures a flawless demonstrator. In addition, it is neither difficult nor expensive to make.

I also would like to introduce the thought that many of our present training films could be broken down into sequence movies, so that practical work could follow each phase of instruction. I am convinced this type of movie has an unlimited future in military training.

near perfect ATTACK

COMBAT is confusion. Out of this confusion, the well trained officer attempts to create order; to coordinate the deadly weapons at his disposal; to confuse, frighten and destroy the enemy. When he succeeds, the result will be victory.

No attack is perfect. This story is about a near-perfect attack that took place in Korea in September of 1950. In this engagement, men and weapons were welded into an effective fighting team. As we shall see, other lessons may be learned from this action, but the importance of good coordination was the main one.

The Situation—On 14 September 1950, UN forces held only a small corner of Korea, known as the Pusan perimeter. Early on the morning of the 15th, the 8th Army was to begin its drive northward that was to destroy the North Korean Army and reach the banks of the Yalu.

The men of Baker Company, 23d Infantry, were not aware of the overall strategy. All they knew was that their objective for 15 September was a small hill. To them it loomed large and ominous. The company had suffered heavy casualties in the past few weeks and morale was not high. The Baker Company commander issued his order to his platoon leaders at 1600 hours, 14 September 1950. He impressed upon them the fact that the company attack was to be part of a larger one, involving the whole 8th Army, and an amphibious landing that would take place in the enemy's rear.*

There was to be plenty of friendly support, including a 30 minute artillery preparation, an air strike and anti-aircraft weapon and mortar support until lifted by call. A platoon of tanks would also be in support. They would move up along a partially dry stream bed to the left of the

* This refers to the Inchon landing in 15 September 1950.

company objective and fire on the enemy's flank and rear.

Baker Company was going to get all the support available to a battalion combat team. That's a lot of firepower. The news raised the morale of the men considerably.

Here was the plan of maneuver for the attack (see Map A). The 2d Platoon was to move out following the 3d Platoon in a company column. Both of these platoons would be in a platoon column formation. After flanking the objective on the left, the attacking platoons would change their direction, form a skirmish line and assault the left knob of the hill. When this was accomplished, the 2d Platoon would build up a base of fire to support the 3d Platoon as they hit the right knob through the connecting saddle.

Preparations for the Attack—The air strike had been scheduled for dawn the next day; but other units got higher priorities, and the strike was rescheduled for dusk of the day before the attack. Soon it began. The "mosquito" spotter plane arrived about 1700 hours and dropped a yellow smoke grenade on the target. Then a flight of F-51's appeared, circled the area and peeled off for the strike.

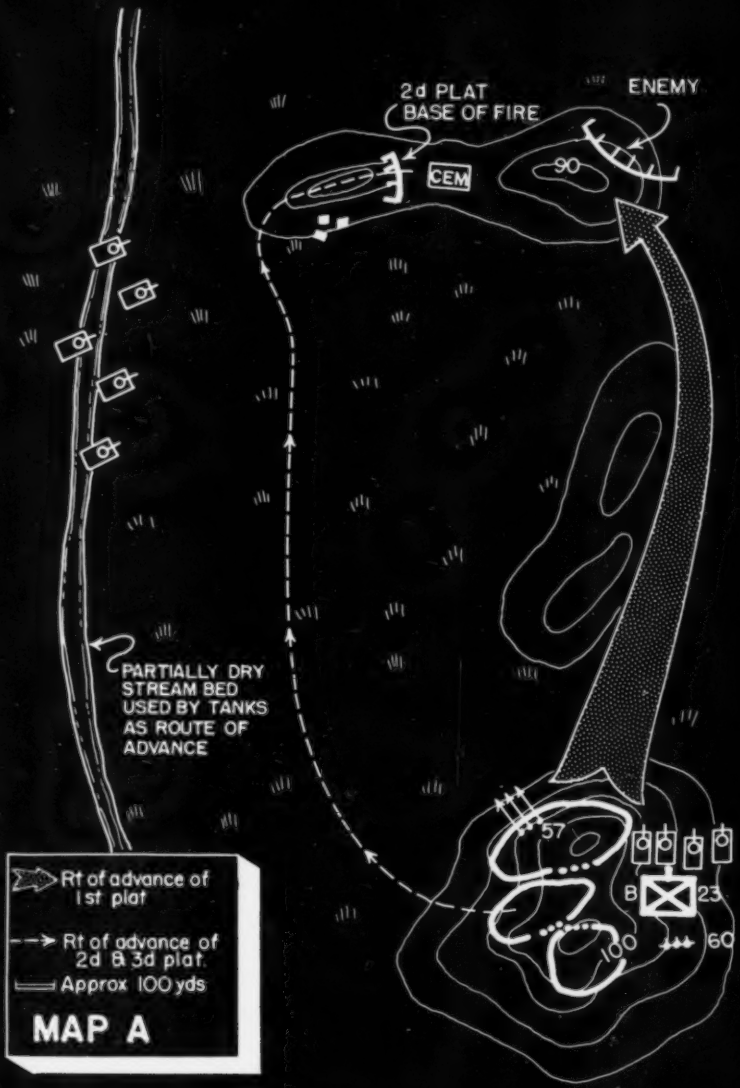
The first two planes each dropped a tank from their wings. Then Number Three came in firing a stream of tracer bullets. The hill ignited with a roar. The flame spread fast over the hill. Even the reverse slope of the right knob was completely scorched. Then the planes came back and repeated the whole procedure. On the next pass the third plane discharged its fire bombs, but even that didn't finish the job. The planes came in again and again until they must have exhausted their ammunition.

Watching this show did a lot for the morale of the tired, dirty men of Baker Company. Night after night the enemy had hit their position. Now at last their side was dishing out a licking in return.

Dawn found Baker Company up and packing its gear. The platoon of automatic antiaircraft weapons was moving up the hill that Baker Company occupied, to get into position to pound the enemy. At 0630, before it was fully light, the first of the out-going artillery rounds could be heard passing overhead. Pretty soon the twin 40's and multiple 50's of the antiaircraft platoon joined the din, raking the forward slope of the objective.

Now the 81 and 60mm mortars began firing. To the right rear of Baker Company, the flash of the 75mm recoilless rifles could be seen as they fired at the enemy from partial defilade. Meanwhile the 57's were firing from the forward area at targets of opportunity. Soon the outlines of the tanks could be seen in the large draw to the left, grinding their way to the objective. The tank platoon was supported by a platoon of Infantry from Able Company.

Approaching the Objective — At 0700 Baker Company moved out. The 3d Platoon leader moved his men off the hill in a platoon column, and the 2d Platoon followed in the same formation. The 1st Platoon was being


2d PLAT
BASE OF FIRE
ENEMY
CEM
90
PARTIALLY DRY
STREAM BED
USED BY TANKS
AS ROUTE OF
ADVANCE
57
B
23
100
60
Rt of advance of
1st plat
Rt of advance of
2d & 3d plat.
Approx 100 yds
MAP A

held in reserve in Baker Company's defensive positions.

The two platoons moved through the rice paddies toward the objective. Everyone was well spread out. To the surprise of many of the soldiers, no hostile mortar or artillery fire was received. The enemy had these weapons and had used them on previous occasions, but was probably afraid to fire them during daylight lest they reveal their positions. This fear was probably a result of our air strike.

Meanwhile, the tanks started firing on the left flank of the objective. When Baker Company reached a point about 100 yards from the objective, the artillery fire was lifted by radio, and mortar fires shifted to the right half of the objective.

A word about communications: Each platoon was using an SCR 300 radio, since the SCR 536 on various occasions had been found unsatisfactory. These radios have since been replaced by the AN/PRC 10 and the AN/PRC 6, respectively.

The Assault—When the two platoons had flanked the objective, they swung around to the right and formed a skirmish line. The 2d Platoon leader moved his 1st and 2d Squads forward. The Weapons Squad followed, while the 3d Squad brought up the rear and acted as reserve squad.* It also had the mission of clearing a few houses at the base of the objective.

The first part was easy. Baker Company took the left half of the objective without oppistion. Later it was discovered that the tanks had driven the enemy from the knob with their few rounds of direct fire.

The attack on the right knob was a different story. The 3d Platoon halted, while the 1st and 2d Squads of the 2d Platoon began firing at the right half of the objective. The 2d Platoon leader moved his Weapons Squad into the line to take up the fire. The 3d Squad had not yet been committed. When everything was set the 2d Platoon leader signalled the 3d Platoon leader. The 3d Platoon immediately took off through the saddle, firing assault fire as they moved.

Next the mortar and ack ack fire were lifted. Overhead machine gun and rifle fire followed the attackers in until they were only a few yards from the right knob. Then this fire too, was lifted. But just as the troops of the 3d Platoon moved onto the crest of their objective, a few more friendly mortar rounds fell on the objective. The men fell back.

Close Combat—This accident was perhaps a blessing in disguise. The enemy was waiting in dug-in positions on the reverse slope of the objective. A hand grenade duel now started between the 3d Platoon and the enemy. The 3d Platoon leader called over the radio that he was being flanked on his right.

The 2d Platoon leader, on the left knob, quickly sent his 3d Squad to cover that flank. He called the company commander, who was with the reserve platoon, recommending that the 1st Platoon be committed to cover the 3d Platoon's right flank and at

* Keeping a squad in reserve is contrary to the doctrine currently taught at The Infantry School. It is recognized, however that in this case the situation may have dictated that 3d squad be employed in the reserve role.

the same time make a double envelopment of the position.

The company commander agreed and ordered the 1st Platoon to move out. Using a route more to the right than the one taken by the other two platoons, the 1st Platoon quickly covered the 1500 yards of open ground to the objective. Meanwhile, the 3d Platoon leader had been wounded and a few minutes later, the 2d Platoon leader got a call that the 1st Platoon leader had also been wounded. Both platoon leaders were evacuated.

During the attack on the left knob, the 2d Platoon sergeant had brought up the rear; but when he saw that his platoon leader was busy coordinating the fires of the supporting weapons, he immediately took over supervision of the base of fire. Now the 2d Platoon leader turned the platoon over to his platoon sergeant, while he ran over to coordinate the two leaderless platoons, who were engaged in a hand grenade and small arms duel with the enemy.

By this time, the enemy was getting more active. He began throwing mortar rounds on the reverse slope of the objective. Although most of this enemy fire fell on their own troops, some rounds fell on the men of Baker Company and caused a few casualties. This enemy fire stopped the hand grenade duel.

The only cover that the hill had to offer was a cemetery located on the saddle between the two knobs. Instead of burying their dead, the Koreans had heaped dirt over them to form small grave mounds. It was behind these mounds that the men of Baker Company had taken cover for protection.

Since the enemy artillery and mortar fire was coming from the area through which the 3d Battalion of the 23d Infantry was to advance, the 2d Platoon leader decided to wait until these weapons had been cleared out (see Map B). Very soon the enemy fire ceased. Now the company only had to move over the crest of the hill and consolidate its newly won position.

Mopping Up—The Baker Company Commander called his 2d Platoon leader to tell him that he was displacing the rest of the company forward to the objective. He arrived about the time that the enemy artillery was silenced. After waiting a few minutes to make sure that the fire had really quit, he sent the company over the crest.

The men soon discovered that there still were live enemy on the hill. Although the fight was now out of them, they wouldn't come out of their holes. Baker's men had to blast them out, and soon the squads were ranging the hill doing this. One wounded prisoner was taken. He had surprised one Baker Company soldier, who had promptly wheeled and shot him with his revolver at a distance of less than one yard. The prisoner said he was a member of the 4th North Korean Rifle Division,

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Captain Glasgow, a '45 graduate of OCS, was formerly Administration Assistant with the Office of the Asst Chief of Staff, G3, Dept of the Army. His article clearly demonstrates how "close coordination pays off." The author recently graduated from The Infantry Officer's Advanced Course at The Infantry School.

NAKTONG RIVER
ENEMY SP 8 MORTARS
X
A
1
3
ROAD
STREAM BED
9
23
2
23
MAP B
Approx 100 yds

while the majority of men on the hill were members of the 2d North Korean Rifle Division. He and others from his unit had been put on the hill after the air strike of the previous day.

All told, there were over 60 enemy dead on the position. Most of these were victims of small arms fire during the cleaning-up process. Eighteen of the enemy had been killed by the air strike and had been partially buried on the hill during the previous night. Baker Company suffered only six wounded and one killed.

The Lessons Learned — Let's see what lessons and conclusions can be drawn from this one-company supported attack. First, it is clear that, while **heavy supporting fires** may not always cause a large number of enemy casualties (particularly if the enemy is well dug in), they are a great morale factor to the men of the atacking force.

The **air strike** also did much for the morale and confidence of Baker Company's men. In addition, it disrupted the enemy to such an extent that he reinforced the position with men from another division. Had the attack immediately followed the air strike, the attackers would more than likely have found the enemy in a highly disorganized state.

The air strike had another important effect. It stopped the enemy from firing his mortars and artillery during the approach stage of the attack for fear that the firing positions would be the target of another strike. This omission allowed Baker Company to reach the objective without casualties. The friendly supporting fires should have included WP smoke to obscure the company's movements.

The **tank's night movement** over almost impassable terrain and sudden appearance on the left flank caused the enemy to abandon half of the objective without a fight. This demonstrates the advantage of aggressive tank mobility. It should be noted that the tank platoon was commanded by an Infantry officer, familiar with the problems of the foot soldier. Three tanks in the platoon became stuck, but they were later pulled out with ease.

Above all, this attack shows that **close coordination pays off**. Supporting weapons were effectively used to make the Infantry's job much easier. The principle of fire and maneuver was applied vigorously in this attack. Control was kept throughout the action and the confusion of battle was held down to a minimum. The result was a near-perfect attack.

Publication of this article should not necessarily be interpreted as reflecting the thought of The Infantry School or The Infantry School Quarterly.

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What Makes A Leader

Maj. Gen. William F. Dean

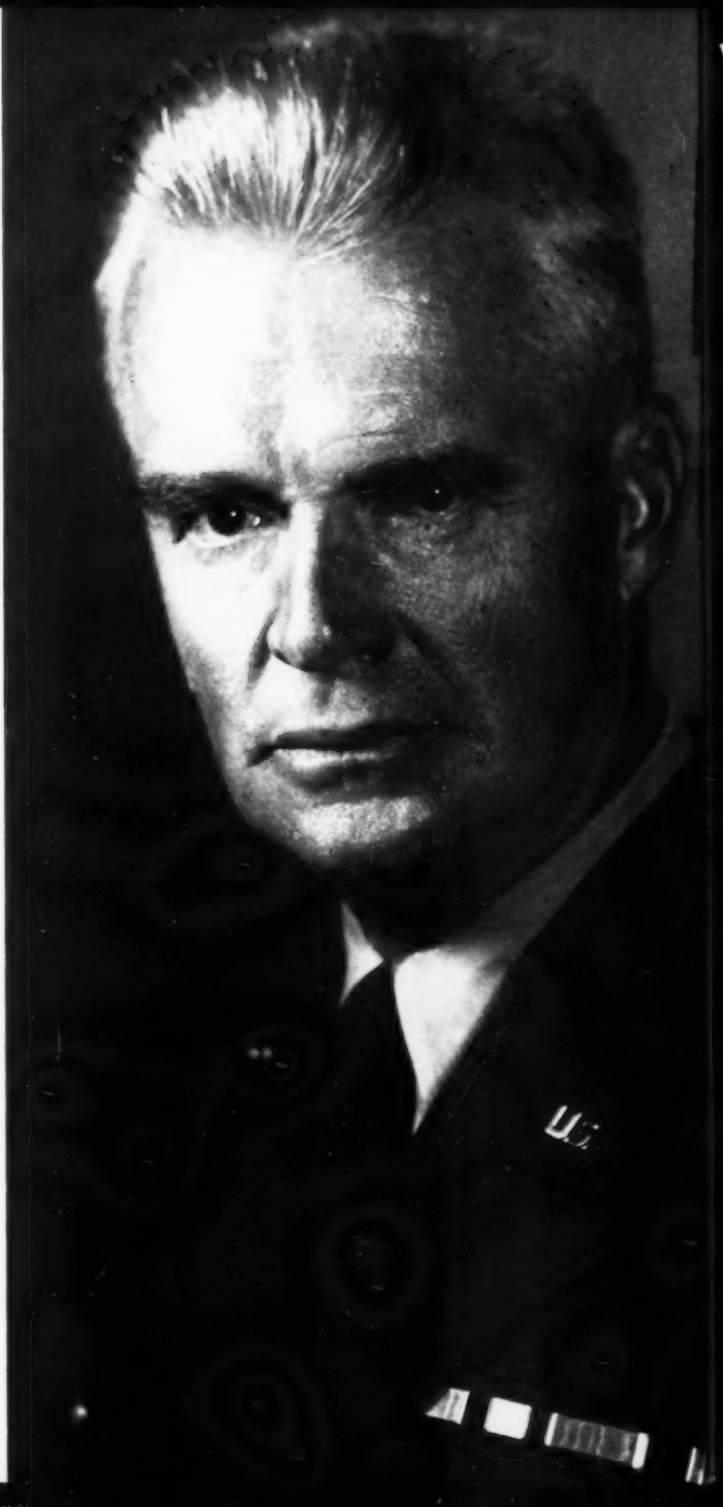
This distinguished battlefield commander believes "today, more than ever before, our Armed Forces need leaders of the first order."

THE INFANTRY leader should not overlook the fact that the most dependable part of his unit is the men in it. To be successful in combat these men must be well trained, well equipped and must have competent, sincere leaders. The Infantryman, the human being that you lead into battle, is your basic weapon.

No Army or similar organization can be successful unless it is buttressed by good leadership. For that reason, every leader or potential leader should, in my opinion, have three qualities. They are . . . integrity . . . loyalty . . . and enthusiasm.

Integrity — I have always maintained that one of the foremost qualities of leadership is integrity. A man who possesses integrity has the desire, the fortitude and courage to fight for the ideals or the cause about which he feels strongly. Moral soundness also entails moral courage—the greatest courage of all. A wild animal has physical courage, but only men—only human beings—are capable of moral courage.

The men you lead into combat respect you as a leader only as long as they know you are honest, a man of principle, a man free from corrupting influences . . . a man above reproach. Once you have obtained their respect, your men will surmount almost impossible obstacles for you. However, the moment a leader



Maj. Gen. William F. Dean, deputy commanding general, U. S. Sixth Army.

releases his grip on personal integrity he can expect to lose a large measure of respect.

Loyalty—The second quality that every good leader must have is loyalty. Of course, loyalty is a "loaded" word with many meanings, but my connotation of the word entails loyalty to the President of the United States, to senior commanders, to the people supporting us, to those who are fighting for and with us and to the people of our own democracy.

You sometimes hear a commander moaning that his junior officers aren't of the proper caliber or that he is not getting competent men to work for him. Such a man, in my opinion, lacks the loyalty so necessary for good leadership. Such an individual is not loyal to those he leads or to those who work for him. Too often such lack of loyalty is an alibi used to conceal the commander's own shortcomings. We must always remember that loyalty is similar to a two-way street. It must flow from senior to subordinate as well as from subordinate to senior.

Enthusiasm — It is difficult for a leader to have enthusiasm without being reasonably proficient in the field about which he is enthusiastic. To my recollection there has never been an All-American football player that wasn't enthusiastic about football. Enthusiasm may not be the sole reason for his success, but you can wager that he probably wouldn't have been an All-American without it.

The same is true in the military. If you are enthusiastic about your assignment, I believe you will be a better leader than a contemporary who may know a little more professionally but lacks enthusiasm.

A man who knows his profession and is striving constantly to learn more about it can scarcely help but be enthusiastic. Remember that enthusiasm is contagious. It is that certain quality that frequently marks the difference between a top-flight leader and a poor one.

Today, more than ever before, our Armed Forces need leaders of the first order. I believe, and I think you will agree, that an individual who possesses integrity, loyalty and enthusiasm—to a high degree—will be a top-notch leader. A leader of the type and caliber needed today by the Infantry, by our Armed Forces . . . and by the citizens of the United States of America.

General Dean's outstanding record as a commander in both World War II and Korea is so well known by Infantrymen that a review of his career is almost unnecessary. It is interesting to note, however, that General Dean, a graduate of the University of California, was commissioned in the Reserves in 1921 and received his RA commission in 1923. He is a graduate of the C&GSC, the Army Industrial College and the Army War College.

ANSWER the following questions to determine whether you are a bolo, recruit, marksman, sharpshooter or expert.

1. (15 pts.) The Browning Machine Gun, Cal. .50 HB, M2, is capable of semi-automatic fire because it is equipped with:
   a. A Bolt latch.
   b. An adjustable trigger bar stop.
   c. Extractor cams.
   d. Sear cams.

2. (10 pts.) The unit fund council consists of:
   a. A minimum of three officers.
   b. A minimum of three noncommissioned officers.
   c. A minimum of three officers or noncommissioner officers.
   d. A minimum of two officers and one noncommissioned officer.

3. (10 pts.) What are the three principal recoiling parts in the machine gun, Cal. .30?

4. (10 pts.) When firing an M1 rifle at a range of 500 yards, how many clicks in which direction would you move your rear sight to move a shot group 15 inches to the left?

5. (10 pts.) How many AN/PRC-6's are issued to the Infantry Rifle Company?
   a. 4
   b. 5
   c. 12
   d. 24

6. (15 pts.) In a daylight attack of a river line, which one of the following normally does not fire in support of the crossing?
   a. 4.2 inch mortars of Regimental Heavy Mortar Company.
   b. 81-mm mortars of Battalion Heavy Weapons Company.
   c. 105-mm recoilless rifles of Battalion Heavy Weapons Company.
   d. 60-mm mortars of an attacking rifle company.

7. (15 pts.) In telephone communication, the type telephone call having the highest priority is the:
   a. Conference call.
   b. Normal call.
   c. Emergency call.
   d. Long distance call.

8. (15 pts.) The 7th FA is in direct support of the 16th Inf Div. When battery positions are occupied, enemy mines are discovered in the area. Under current U.S. Mine Warfare doctrine, who would clear the enemy mines?
   a. AT Mine Platoon, 16th Inf.
   b. 7th FA Bn.
   c. 1st Engineer (c) Bn, 1st Div.
   d. Reserve Bn, 16th Inf.

Turn to page 90 to see how you rate. Look for another QUARTERLY Quiz in the next issue.

EVER SINCE primitive times men have domesticated dogs and used them as sentries, for hunting, and as scouts. They have made use of dogs' intelligence, loyalty, keen senses and latent ferocity to protect and help them in the tasks of everyday life. Today these animals can be a potent weapon in warfare. When used properly, they can be the Infantryman's best friend.

In Korea during the summer

SCOUT DOGS
ON PATROL
LT PAUL F. GORMAN
LUBEY

the dog is a night weapon -- making

of 1952 the 26th Infantry Scout Dog Platoon was attached to IX Corps, then defending a sector centered on the Iron Triangle. The use of scout dog teams was confined to the American division of the corps, but that division undertook an extensive program of education for its battalion intelligence officers designed to teach employment of dogs.

There was some difficulty encountered at the beginning of the program, primarily because the use of dogs was not embodied in patrol doctrine and training, and was foreign to the experience of most patrol personnel. Combat Infantrymen were reluctant to accept the idea of a dog on patrol.

There was, for instance, considerable apprehension that the dogs might chase animals, shy at passing shells, or bark and whine in the face of the enemy. But the steady, business-like performance of the dogs on their first few patrols soon dispelled these misgivings, and earned for them the best of combat reputations.

Dynamic exaggeration, however, soon worked distortions in their reputation. Belief became widespread that the dogs could unerringly detect the presence of Chinese or North Koreans by their distinctive odors. The enemy was rumored to be deathly afraid of our dogs, and therefore especially wary of any US patrol known to be using them.

Fantastic stories about feats of intelligence and ferociousness performed by the dogs were added to the repertoire of every chow line raconteur. These, and similar misbeliefs, caused a flood of requests for dogs from prospective patrol members. The appearance of a dog at the front before the departure of a patrol usually raised the morale of the men, who seemed to derive from the presence of the animal a new assurance and confidence.

This exaggerated confidence in the capabilities of war dogs was as mistaken as the original skepticism. Both misconceptions sprang from a lack of concrete information, which the division directives and demonstrations could hardly remedy. Patrol after patrol went forward of the line with no more than the scantiest orientation of the patrol leader and his patrol on the characteristics of the "weapon" upon which they relied for security. In some cases, of course, what little information they did possess was sufficient, for sometimes the dogs did alert their patrol to the presence of enemy. Here the dog team probably functioned **despite** the patrol, for the dogs were usually misused, with deleterious and sometimes fatal results. Two examples of such misuse are typical of what happened, or might easily have happened, on most patrols employing dogs.

An ambush patrol, accompanied by a scout dog, was stationed about 400 yards forward of the MLR, relying on the dog to warn them of the enemy's approach. The patrol had been in position about six hours when both its wire and radio communication failed. A company officer

with a small patrol moved forward toward the ambush, laying another wire. When the patrol reached the ambush site, the officer stood erect with his weapon above his head, and advanced along the path previously designated as the approach route for friendly patrols. When he was close enough to discern individuals of the ambush, he was amazed to see that they were sprawled on the ground face down.

Fearful that he might be walking into a baited enemy trap, he approached cautiously, only to discover that, to a man, the rear security of the ambush was asleep. He then crossed the entire ambush position without once being challenged. The patrol leader, who was sitting beside the dog, was so surprised by the officer's approach that he cried out. A tour of the ambush perimeter revealed that only five of the patrol's 16 members were awake. Most of the men had been relying so much on the dog that their own alertness had relaxed to the point of somnolence. The dog, however, had been sitting on the freezing ground in one position for hours, tensed and expectant, until he had become physically exhausted. He, too, had relaxed, and had not been alert enough to detect the approach of the wire patrol.

On another occasion a patrol was sent well forward of the MLR with the mission of intercepting an enemy patrol and capturing a prisoner. A dog was furnished to enable the patrol to find the enemy without danger of ambush. There was a light but fairly constant wind, and the patrol leader carefully chose a route that would give him a headwind. The dog team was correctly placed as the point, and control and noise discipline were excellent.

Despite these precautions, the patrol walked into a well-planned enemy ambush, and the dog, handler and patrol leader were all killed in the first burst of fire. The enemy had emplaced himself on the high ground on either side of a steep defile through which the patrol had chosen to pass. Though the enemy was directly upwind from the dog, the strata of heavy night air apparently had prevented their scent from reaching him. Again complete reliance on the dog had caused a lack of normal precaution. In this case, such confidence cost lives.

In neither of these examples could it be said that the dog was in error. The animals were just misused. The Infantry may well use more dogs in any future conflict than it ever used before, and the need for facts about this weapon—not claims, rumors or sentiment—will be critical.

The American war dog is procured and trained in the ZI. Contrary to the practice of World War II, private owners may no longer volunteer their pets for such duty. The animals are now purchased from kennels. Most war dogs are of German shepherd blood, but they do not have to be pure bred. Handlers express a preference for the mixed breeds. Generally speaking,

dogs are trained for one of three types of activity: sentry work, trailing or patrolling.

Sentry dogs are used by the security forces of communication zone installations — warehouses, dumps and PW enclosures—as a means of detecting the presence of unwanted persons and of repelling intruders without consequences. The employment of a few dogs greatly increases the efficiency of even a small guard force. In areas where brigandage is widely practiced, even by friendly natives, the dogs are indispensable. Such dogs are noisy and vicious, trained to respond to the voice command of their handler. Consequently, they are of no use on the front.

Trail dogs are used to hunt fugitives in the manner of a bloodhound. Infantry units assigned to guerrilla suppression will find such animals invaluable. They are often the only means of tracing marauders to their hideout. Infantry units on the front can counter an enemy who uses "linecrossers" by immediately employing trail dogs from the point of any detected crossing. But trail dogs are not trained in the silence and steadiness which would permit their use forward of friendly lines, and will therefore be seldom used by the combat Infantryman.

His dog is the "Infantry scout dog." These animals usually possess the proud configuration and intelligence of the German shepherd and are trained to an almost incredible perfection. They each work with and respond to only one master. He is usually a soft-spoken, patient, competent young soldier who has undergone almost all his training and combat with his dog.

The two make a team that evokes respect and admiration in their comrades of the line: a great gray beast that paces back and forth like a caged lion on a leash, held firmly by a quiet, capable-looking Infantryman. One of the problems of the handler is to convince soldiers that his dog will reciprocate their good will only so long as he is present. With the handler's consent, and in his presence, the dog can be approached and fondled with only a bit more precaution than a housepet might require. Because he is trained to assault strangers, a scout dog will attack without hesitation a soldier whose face he has been licking a moment before. In the absence of the handler a scout dog should be left strictly alone, even by those who have worked with him extensively. But, needless to say, a dog is a welcomed addition to any patrol.

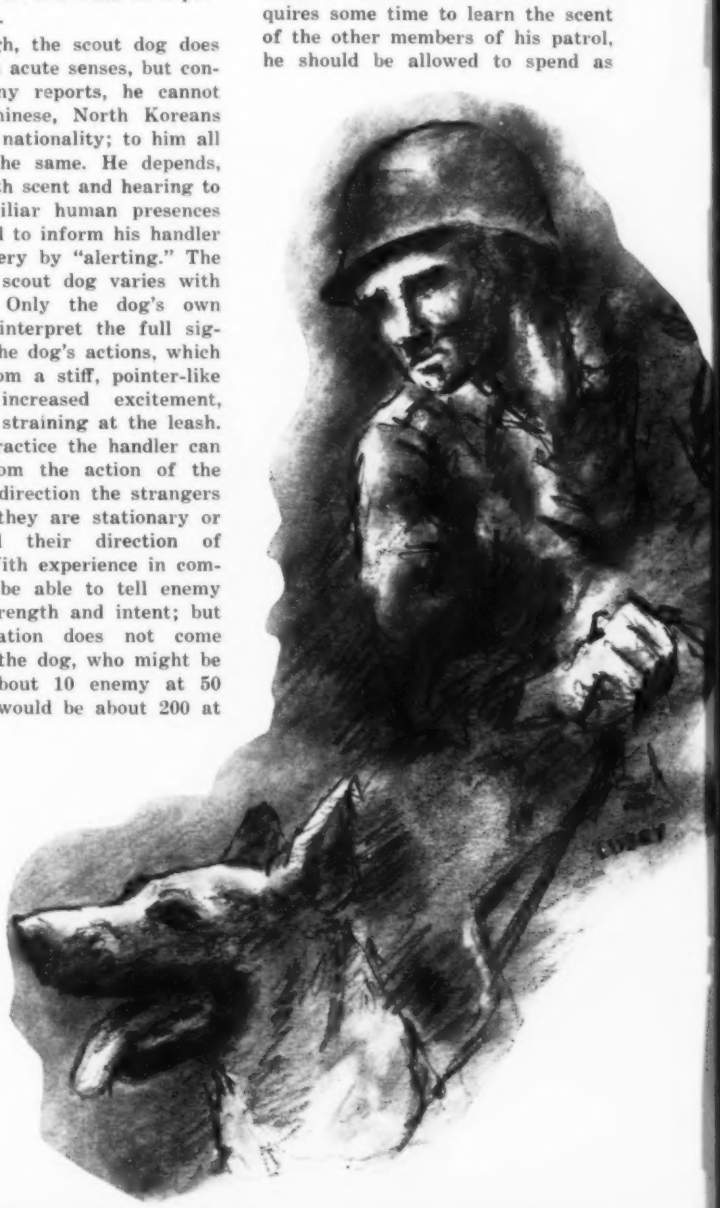
The arrival of a dog team injects a Hollywood atmosphere into the routine of patrol preparation, to which even the most hardbitten veterans respond. Before receiving final instructions, the dog handler will draw the patrol leader aside and calmly review with him a sketchy outline of the proper usage of the dog team. In Korea the dog team seldom arrived more than a few hours before the patrol's departure, and the final order was somewhat hurried.

Usually, the only instruction concerning the dog team, relayed to members of the patrol, was a dramatic order to shoot the dog should the handler become a casualty. In such cases the dog would defend his fallen master against anyone. Even

when the instructions are handled as badly as that, the patrol will set out feeling the senses of the dog reaching out around them in a protective screen.

True enough, the scout dog does depend on his acute senses, but contrary to many reports, he cannot smell out Chinese, North Koreans or any other nationality; to him all human are the same. He depends, rather, on both scent and hearing to detect unfamiliar human presences and is trained to inform his handler of his discovery by "alerting." The "alert" of a scout dog varies with the animal. Only the dog's own handler can interpret the full significance of the dog's actions, which may vary from a stiff, pointer-like stance, to increased excitement, trembling or straining at the leash. After long practice the handler can determine from the action of the dog in what direction the strangers lie, whether they are stationary or moving, and their direction of movement. With experience in combat he may be able to tell enemy proximity, strength and intent; but such information does not come wholly from the dog, who might be as excited about 10 enemy at 50 yards as he would be about 200 at 300 yards.

Anyone is a stranger, or enemy, to the dog on patrol except those individuals to whom his senses have become familiar. Because he requires some time to learn the scent of the other members of his patrol, he should be allowed to spend as



much time with them as possible before departure. Once moving, he will again require a few minutes to grow used to the noises the patrol itself makes in motion; but after a few alerts, and reassurances from his handler, he will become excited only by sounds and scents coming from sources outside his patrol. No matter how excited he becomes, he will not make noise.

Trained to respond to signals of touch or imperceptible whispers, the dog will on command sit, lie down, stand frozen, crawl or attack without so much as a whine. Furthermore, his training has conditioned him to battle noises—such as passing shells, machine gun fire, or explosions—and to the pyrotechnics —tracers, flares and the like. He is too intent on human quarry to be sidetracked by rabbits, rats or other game. With a concentration far surpassing that of his human comrades, he fixes all his senses on his mission. Under favorable conditions he may be able to operate effectively at distances up to 500 yards.

A thorough understanding of what conditions of terrain, weather and the combat situation affect the efficiency of the dog's scent or hearing is a prerequisite to the proper planning or execution of a patrol. In daylight a human can see farther and better and can employ his other senses better than can a dog. Therefore, except in cases of unusually restrictive vegetation, it would be as foolish to use a dog for daylight patrolling as it would be to issue infrared devices. **The dog is a night weapon, designed to detect in darkness the presence of any person other than the members of his own patrol by making use of his super-acute ears and nose.**

The dog's hearing is vastly more sensitive than that of humans, but unfortunately it cannot be entirely relied on in combat. Battlefield noise

and wind both tend to impair its effectiveness, for both tend to obscure other sounds. A clever enemy will always utilize the noise of passing shells, aircraft, firing in the distance, or the rattle of branches in the breeze to cover his movements. If he is an experienced enemy, he will make very little noise anyway.

More important than these considerations is the fact that the patrol must continually cope with the menace of an enemy ambush which neither moves nor makes noise. Because of this threat the patrol leader must proceed as though he were relying solely on the dog's sense of smell, exercising careful judgment based on an appreciation of its limitations and capabilities.

In order for the dog to use his nose effectively, he must be in the direct path of air moving from the enemy to him. Friendly personnel placed between the dog and his quarry seriously impair his efficiency by clogging the air with their own scent. The vagaries of air currents also impose certain difficulties. Because air tends to move in strata at given altitudes—this is especially true of dew-sodden night air — the scent of enemy located above a dog may never reach him, even though the direction of the wind may be favorable. Shifting breezes will also confuse the dog. Mountainous terrain, like that of Korea, generally forces the dog to work under most of these disadvantages, and reduces his reliability either as security or as a source of combat intelligence.

Another limitation on the dog is fatigue. Before each patrol he is put through refresher training which brings him to a high pitch of anticipation. While he is forward of the lines he works with such intensity that his faculties are bound to be taxed if the mission is prolonged, or if he is forced to work in extremes of weather. After five to eight hours, depending on the individual dog, he becomes tired, his alertness drops off sharply and, like a sleepy soldier, he can no longer be depended upon for his usual effort.

Naturally, the capabilities and limitations of the dogs will influence the mission and route of patrols to which they are assigned. In Korea dog teams were employed for two general purposes: on ambushes and on probes. The ambush patrol was a stationary force that deployed to trap an enemy force. The dog was used to provide warning of enemy approach and as security against any enemy attempt to encircle the ambush, a not uncommon occurrence.

Usually this kind of patrol also was emplaced to provide security for the MLR, and was as important for this reason as for its assigned mission. The use of dogs increased its effectiveness in both its jobs. Even on the very rare windless night, the dog could use his ears to good advantage, because the ambush was not moving and consequently made no sound. The com-

The author graduated from the U.S. Military Academy in 1950 and served in Korea with the 31st Inf, 7th Inf Div. At present he is studying Public Administration at Harvard University Graduate School.

mon position of the dog team was either on the windward edge of a perimeter, or on the tip of the windward wing of a V formation.

Probing patrols in Korea were given a variety of names by different regiments. In general, they penetrated deep into no-man's land or behind the enemy OPLR, with various missions. The dog teams were used principally as security during movement, but the dog often became the key to the mission. For example, one battalion sent out patrols along suspected enemy patrol routes with the mission of intercepting an enemy patrol and capturing a prisoner. The patrol would proceed until the dog detected the enemy. Should the enemy be moving toward the patrol, it would deploy into an ambush. If away from the patrol, it would attempt to intercept. Were the enemy static, the patrol would attempt an envelopment. The dog team would be used as the point while the patrol is moving.

The patrol leader must consider furnishing a bodyguard for the dog handler, who cannot very well control his enemy and fire his weapon at the same time. The addition of this man will make the point, as well as communication, more awkward. In any event, the patrol should have a rehearsed plan for deployment in the face of the enemy. This plan must include movement of the dog team to security, or of a security force to the dog team. Once an alert is given, the dog, having done his job, should, if possible, be retired from the point and a normal forward security used.

Scout dogs are trained to attack their quarry. The keen anticipiation that breeds alertness on patrol is built up by leading the dog to believe that he will eventually get his fangs into anyone he detects. Therefore, once a dog is alerted, once he knows where his quarry is, he is extremely difficult to hold back. If the patrol finds it necessary to move in on the enemy to accomplish its mission, the dog will strain at his leash all the way. In one instance in Korea a 150-pound handler was literally dragged through the underbrush towards an enemy OP by 110 pounds of fighting mad and eager dog. Even if handlers are able to cope with such enthusiasm, dogs cannot be expected to operate quietly when closing with the enemy and the patrol may be endangered.

The use of the dog with a moving patrol demands of the patrol leader constant vigilance lest the dog be called upon for protection which he cannot render. The command of such a patrol is as difficult a job as can be thrown at even an experienced patrol leader. It certainly is not the type of patrol to be ordered by inexperienced S2's for inexperienced patrols. Unless it is feasible to conduct extensive rehearsals and training before the patrol, it is better to use dog teams for static ambush missions until patrol leaders and the staff perfect their techniques for handling this "weapon."

The patrol leader must learn that like an infrared seeing device, the dog is merely an added means of security at night. Like these devices, the dog is not the be-all and end-all of security. He must learn that the grave danger to him and his patrol lies not in what the dog

does detect, but in what he does not detect. In a very real sense, the fact that the dog does not alert in a given situation may be the only information upon which he will have to act. He must, however, anticipate and recognize situations in which terrain, wind or other factors render the dog unreliable and then learn to employ, without hesitation, his usual methods of security.

The intelligence officer must use considerable latitude in plans for patrols using dogs. Supporting fire plans and route reports for artillery should allow for deviations that are made necessary by shifts in wind. Concurrent patrols in the same or adjacent areas must be arranged to allow for variations both in timing and route by any patrol using dogs.

The plans for employing the dog on patrol, the route, the mission and support for the patrol are all affected by the characteristics of the dog, and therefore must be decided only after careful evaluation of the limitations of the animal. The advice of the handler, or someone from the dog unit, may be helpful to the S2. At any rate, the handler should assist the patrol leader in making his detailed plans. The handler should also be present at the debriefing. Valuable information concerning enemy positions and movements can often be deduced from the behavior of the dog at various points along the patrol's route.

With a capable intelligence officer doing the planning, with a well trained and rehearsed patrol, with an alert patrol leader and a good dog team, a patrol can move with great security even in a hotly contested stretch of no-man's land. Careful use of the dog and thorough debriefing and analysis on the part of the staff can give combat intelligence that otherwise would be impossible to obtain. As valuable as dogs are, it is obvious that sweeping statements about patrols penetrating deeper and moving faster with less risk of casualties when they are spearheaded by dogs are largely bunkum. On the contrary, a dog patrol often sacrifices its speed and penetration for the sake of added security. (There is, of course, always the possibility of the dream situation in which the patrol crosses flat land in a straight line with a gentle wind blowing into their faces all the way out and all the way back.) A properly used dog practically eliminates the possibility of enemy surprise, but the effect of such security in reducing casualties cannot be accurately estimated from experience in Korea.

Considering that Korea was hardly favorable for the best use of dogs, it seems clear that scout dogs may well make an important contribution to any future patrol, provided the Infantry takes steps now to take advantage of this "weapon." Next to his rifle, the combat Infantryman's best friend on patrol may be his dog.

the Infantry's Personal Artillery

IN THE courtyard of a badly shot-up hotel in Essen, Germany, a few weeks before V-E Day, an American soldier used his handkerchief to rub the dust from several weapons of unusual appearance. He was one of a scant dozen men who had carried the new weapons—the 57mm and 75mm recoilless rifles—through their first combat test . . . the 17th Airborne Division's crossing of the Rhine River near Wesel. This action provided the initial stepping stone in the further development of the Infantry's own personal artillery —the recoilless rifle.

The recoilless rifles were developed to give the Infantry a light weight, direct fire weapon of sufficient caliber to neutralize enemy emplacements, tanks and automatic weapons — a weapon capable of placing large caliber fire close to our advancing troops. The recoilless principle did away with the heavy recoil mechanism and carriage required by other weapons of similar caliber. It also enabled the heavy weapons groups to become highly mobile and stay up with the attacking rifle units.

Recently, the recoilless rifle added a new member—the 105mm recoilless rifle. This formidable newcomer is the largest* and most devastating weapon of the recoilless group. The addition of the 105 to the recoilless rifle group made it necessary to organize a new recoilless rifle platoon.

You probably have some questions to ask about the organization of the new recoilless rifle platoon and about the new weapon itself. You may want to know how the new weapon will aid the battalion commander, how he will use it or perhaps what happens to the 75mm recoilless rifle?

The big question, however, is how will this platoon be employed in an offensive operation and what will be the functions of the 105mm rifle?

Let's concentrate on the last question, because in answering it will directly or indirectly answer all the rest.

We shall start by briefly reviewing the personnel and equipment of the new recoilless rifle platoon.

The Recoilless Rifle Platoon. A glance at chart 1 shows that the platoon consists of 38 enlisted men and one officer and that it is divided into a platoon headquarters, two 105mm recoilless rifle sections and one 75mm recoilless rifle section.

In platoon headquarters, we find a platoon leader who commands the platoon and is, of course, responsible for its training and tactical employment.

The platoon sergeant is second in command. His principle duties are to

---

*

		Weight	Length
	105mm recoilless rifle	365 lbs.	134.3"
	75mm recoilless rifle	114.5 lbs.	82"
M18A1	57mm recoilless rifle	46.0 lbs.	61.6"

the organization of the new recoilless rifle platoon

supervise the maintenance and use of the platoon's transportation and to insure an adequate ammunition supply. In addition, he may assist the platoon leader in the tactical control of the platoon.

There are two radio-telephone operators in the platoon headquarters. These men carry the AN/PRC-10 radio. One of these radios is in the platoon net, the other radio is in the Company Command net. This enables the platoon leader to contact or be contacted by his section leaders or the weapons company commander at any time.

by Capt Gordon J. Duquemin

The driver operates the ¼ ton truck found in the platoon headquarters and acts as messenger for the platoon leader.

Notice that there are two identical 105mm recoilless rifle sections. Each consists of a headquarters and two squads. The section headquarters is made up of the section leader and a ¾ ton truck driver who operates and maintains the section ¾ ton truck and AN/PRC-10 radio.

The squads in the 105mm recoilless rifle section consist of five men each: The squad leader (who is also the gunner), an assistant gunner, two ammunition bearers and a driver. The driver operates and maintains the ¼ ton truck on which the 105mm recoilless rifle is mounted.

After examining the 75mm recoilless rifle section (chart 1), note that it is not composed of squads. There is depth or twin personnel within the section: Two gunners, two assistant gunners, and four ammunition bearers. This duplication makes it possible to fire both weapons.

Equipment. (See Chart, Page 75). There are four 105 mm recoilless rifles and two 75mm recoilless rifles in the platoon. There is one 105mm recoilless rifle per squad, and two 75mm recoilless rifles per section. When possible, all six of these rifles should be used in the attack. Before this can be done, however, the following conditions should exist:

1. Suitable position areas.
2. Ammunition in sufficient quantity.
3. Sufficient time to occupy the positions.

Hand Carry. When the terrain is so rugged it prevents the use of vehicles, "hand carry" becomes necessary. In this case, only the 75mm recoilless rifle section is used. The platoon leader may use the ammunition bearers from the 105mm recoilless rifle sections to supplement the 75mm recoilless rifle section, permitting the use of both 75mm rifles.*

Communications. The communications within the platoon (Chart 2) consists of five AN/PRC-10's (two in platoon headquarters and one in each section), seven CE-11 sound power telephones (one per gun and one for platoon headquarters), and one EE-8 telephone (designed for use between platoon headquarters and company headquarters).

Transportation. There is one ¼ ton truck with one ¼ ton trailer in platoon headquarters for command and reconnaissance purposes. Within each 105mm recoilless rifle section, there are two ¼ ton trucks with 105mm recoilless rifles mounted on them and one ¾ ton truck with one ¾ ton trailer for use as an ammunition carrier. The 75mm recoilless rifle section is equipped with one ¾ ton truck and one ¾ ton trailer for the transporting of weapons and ammunition. This is sufficent transportation to make the platoon highly mobile.

Targets. No discussion of this nature would be complete without the mention of specific targets for which

* The one .50 caliber machine gun in the platoon is to be placed on the pedestal mount of the headquarters ¼ ton truck.

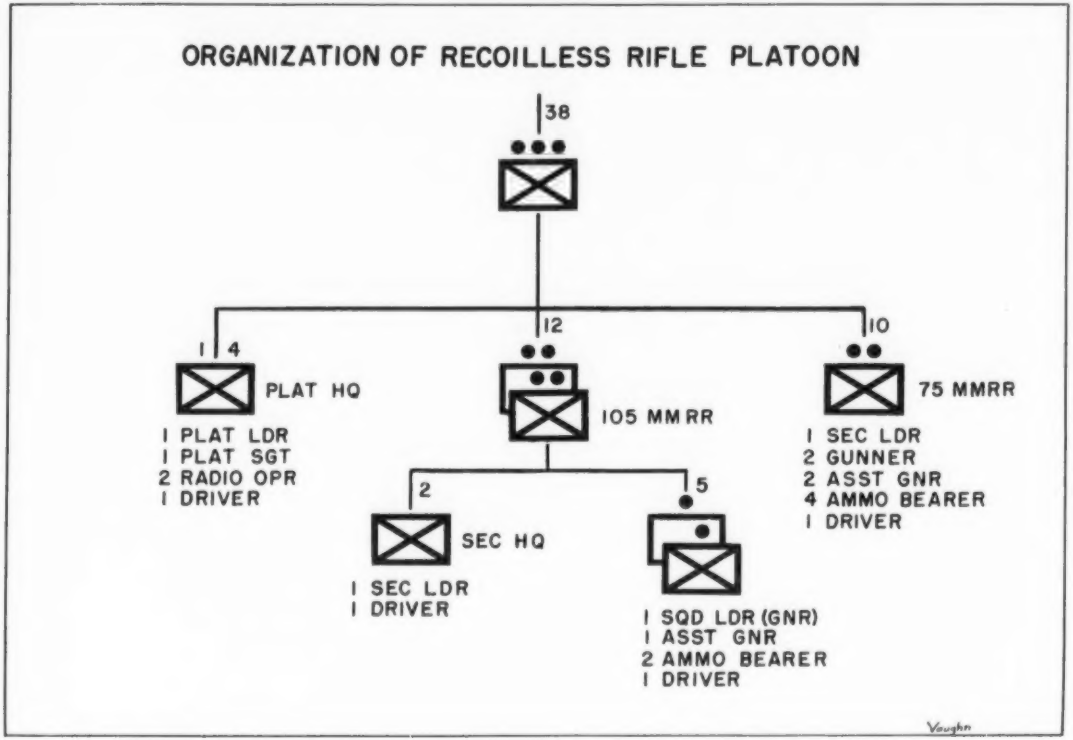

ORGANIZATION OF RECOILLESS RIFLE PLATOON
38
1 4
PLAT HQ
1 PLAT LDR
1 PLAT SGT
2 RADIO OPR
1 DRIVER
12
105 MM RR
2
SEC HQ
1 SEC LDR
1 DRIVER
5
1 SQD LDR (GNR)
1 ASST GNR
2 AMMO BEARER
1 DRIVER
10
75 MMRR
1 SEC LDR
2 GUNNER
2 ASST GNR
4 AMMO BEARER
1 DRIVER
Vaughn

Chart 1

these weapons are designed. Some of these targets are:

1. Located targets such as grouped personnel, crew-served weapons, fortifications, enemy tanks and other vehicles.
2. Enemy tanks . . . a primary target for the 105mm recoilless rifle section and a secondary target for the 75mm recoilless rifle section in the attack. Because of their low armor penetrating ability, the 75mm recoilless rifle should be used against tanks only when the the 105mm recoilless rifles and our own tanks cannot handle the situation or when in danger of being overrun.

Mission. The recoilless rifle platoon provides antitank protection and renders continuous close fire support to rifle units by delivering direct fire at point targets. The 105mm recoilless rifle sections are usually employed in an antitank role and occasionally in a close support role. The reverse is true of the 75mm recoilless rifle sections.

Tactical Employment. The three methods of tactical employment of the platoon are: **General support, direct support and attachment.** The battalion commander, of course, makes the final decisions as to the method used.

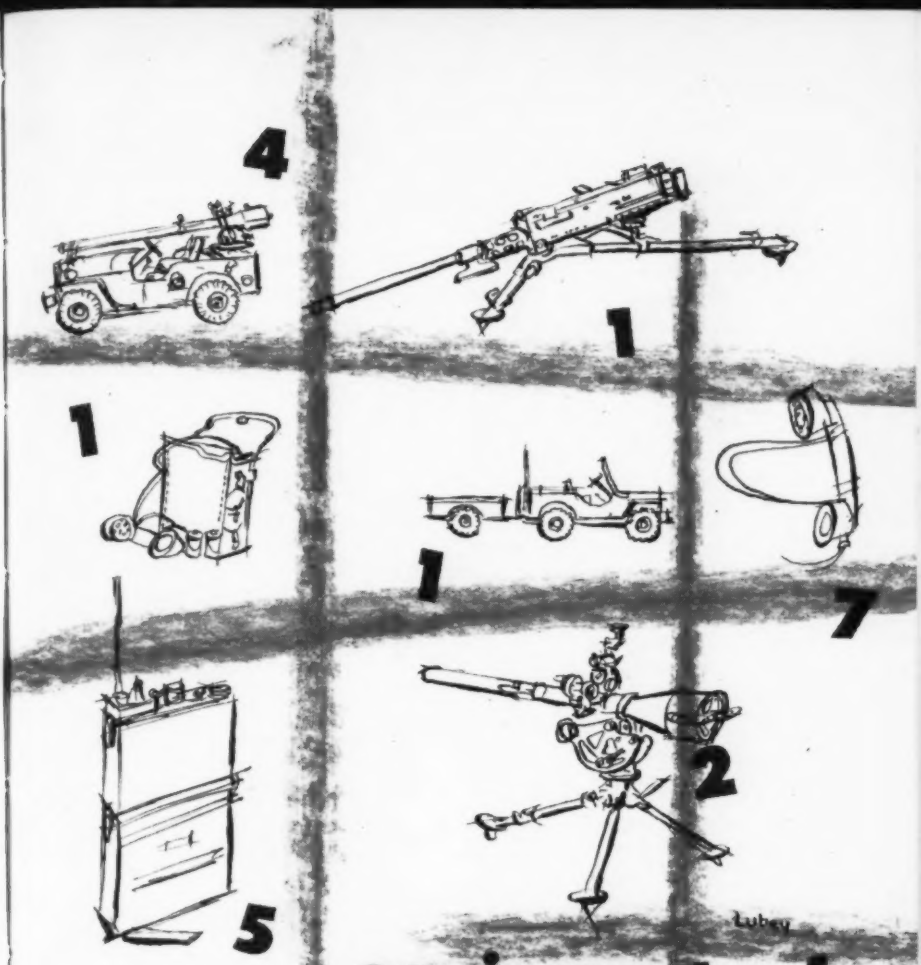
General Support. If fire control is retained by the battalion commander, and the platoon supports the entire battallion, then **general support** is used. In such a case displacement, selection of firing positions to carry out assigned missions, and coordination of fire control within the platoon are the responsibility of the platoon leader. The battalion commander, however, controls the specific fire missions of the platoon. To employ the platoon in a **general support** role certain conditions must exist. These are: (1) The ability to mass the fires of the platoon, or a majority of the platoon, on the critical portions of the battalion zone, to include the major portion of the battalion objective, and (2) the ability of the battalion commander to control the fire.

Previous experience indicates that **general support** is the best means of using the platoon's fire power. We must, however, be practical and recognize that the terrain and situation may often dictate a decentralized use of the weapons. When this is true, direct support or attachment should be used.

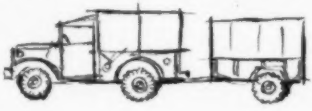
Direct Support. When the entire platoon or sections of it are placed in **direct support,** the responsibility for the selection of positions and control of fires are those of the platoon leader or the section leader. We have, in fact, decentralized control from the battalion level to the platoon level.

When in **direct support** of a rifle company the platoon leader is responsible for delivering maximum effective fire to support the company. When employed by sections, the section leader has this responsibility. As compared to attachment, the major advantage of **direct support** is that control is retained within the platoon and the heavy weapons company.

Attachment. When control is highly decentralized attachment



equipment of recoilless rifle platoon



4. ¼-ton truck w/105mm RR mounted
1. .50 caliber machine gun
1. EE-8 phone
1. ¼-ton truck w/trailer
7. CE-11 sound power phones
5. AN/PRC-10 radios
2. 75mm recoilless rifles
3. ¾-ton truck w/trailer

should be used. Here the complete control, including tactical employment and supply, passes to the supported unit commander. When a unit operates alone as a task force, as part of an advance guard, or over rugged terrain, recoilless rifles will often be **attached.**

Ammunition Resupply. Because of the weight and bulk of the ammunition and the limited basic load carried by the platoon, ammunition resupply represents a real problem. As a matter of interest, each 105mm recoilless rifle squad carries four rounds on carrier with an additional 20 rounds per rifle on each ¾ ton truck and ¾ ton trailer in the section headquarters, and 16 rounds per rifle on the Battalion Ammunition Train. The 75mm recoilless rifle section carries 34 rounds per rifle on its ¾ ton truck and ¾ ton trailer, and eight rounds per rifle on the Battalion Ammunition Trains.*

When in **general support,** the heavy weapons company commander will, of course, assist the platoon leader with this problem. When the platoon or its sections are in **direct support,** the platoon leader or section leader is held responsible for ammunition resupply by the company commander. However, the company commander will assist in ammunition resupply. When **attached,** although responsibility for ammunition rests with the supported unit commander, the recoilless rifle platoon or section leader uses his normal supply channels for ammunition resupply. Routes of ammunition supply should always be considered in selecting firing positions, to avoid excessive "hand carry."

Displacement. The recoilless rifles usually remain in position during the assault and displace rapidly when their fires are masked in order to support the rifle units during reorganization. When their fires are masked, or are about to be masked by the attacking rifle units, or when the range becomes excessive, the platoon must displace to a new position. Recoilless rifle leaders must continually plan for displacement. When in **general support,** the displacement order often comes from the battalion commander, but this authority is usually delegated to the Heavy Weapons Company Commander or the recoilless rifle platoon leader.

In **direct support,** authority for displacement rests with the platoon or section leaders. In **attachment,** the supported unit commander gives the order which is usually based upon the recommendations of the platoon or section leaders.

To be prepared for displacement, the platoon leader and section leaders must consider several factors. These are: (1) When to displace, (2) Locations of new positions, (3) Missions after displacement, and (4) Routes. (Routes are particularly important since the 105mm recoilless rifles cannot be hand carried. When routes suitable for vehicle travel cannot be located, displacement will be by hand, using the 75mm recoilless rifles.)

When firing in **general support** of the battalion, the platoon displaces by section echelon, either one or two

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* Basic load — 105mm RR — 40 rds/rifle.
75mm RR — 42 rds/rifle.

sections at a time as determined by the battalion commander or the recoilless rifle platoon leader. When a section operates alone, the entire section must displace at one time. This is necessitated by the fact that if two rifles in a section are a great distance apart, they cannot both be resupplied with ammunition by its ¾ ton carrier.

When the rifle units take their objective the recoilless rifle platoon should displace to a position that will permit it to support the reorganization. Prompt displacement is vital so that these weapons can be utilized to the maximum in repelling counterattacks. Upon arrival at their new positions, the 105mm recoilless rifles should be emplaced to cover possible tank approaches. The 75mm recoilless rifles should be located to cover other likely avenues of approach. The principles for employing a recoilless rifle platoon in the attack are not difficult if you remember that the mission is to provide close and continuous support to the attacking rifle units and to provide antitank protection for the battalion.

The 105mm recoilless rifles should be used chiefly in an antitank role and will usually be employed by section in general support. In exceptional cases, the 105mm recoilless rifle sections may be attached to rifle companies that are fronted by dangerous tank approaches. The latter method should be used only when a rifle company operates beyond reinforcing distance of the battalion or when an obstacle prohibits rapid movement of the recoilless weapons from one part of the battalion zone to another.

"Normal Employment." Let's look at some examples that point out the normal employment of the platoon. For example: We have a battalion in an advanced guard formation moving on foot (or motorized) with a platoon of tanks attached, and these tanks have been further attached to the lead company. Assume that a tank threat exists from the front. How will the recoilless rifle platoon be employed?

The 105mm recoilless rifles should be employed in **general support** moving by bounds behind the leading company while the 75mm recoilless rifles, in **general support,** move by carrier near the head of the main body. Since tanks are attached, forward antitank protection already exists and the 105mm recoilless rifles can best be used under control of the battalion commander. Another reason is that their position in the column permits immediate employment by the commander when necessary.

When a tank threat exists on one flank, the 105mm recoilless rifles should be used to cover the main avenues of approach on the threatened side. Again, the 75mm recoilless rifles should be on carrier in general

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Once a member of Dog Company, 1st Bn, 5th RCT (Korea), Capt Duquemin has a keener than usual interest in heavy weapons. He is a former Infantry School Weapons Department instructor, a USMA graduate ('47) and more recently graduated from the Infantry Officer's Advanced Course, The Infantry School. His objective in this article ". . . to bring readers up to date on the new 105-mm Recoilless Rifle Platoon."

support near the head of the main body.

Here's another example: Assume that the battalion is the advanced guard, but without attached tanks, and is moving on foot. The question is raised, how do we employ this platoon in such a situation?

We will assume that **a tank threat exists from the front.** In this situation a section of 105mm recoilless rifles should be attached to the lead company for antitank protection. The remainder of the platoon should be in **general support** near the head of the main body. **Were the threat from the flanks,** the 105mm recoilless rifles would be kept in **general support** and move by bounds within the column to give flank protection, and the 75mm recoilless rifles would be attached to the lead company. In both cases the 105mm recoilless rifles have been used to provide maximum antitank protection for the battalion while the 75mm recoilless rifles provide close fire support.

Let's motorize the same battalion, thus speeding the movement of the column. Now if **a tank threat exists from the front,** then the 105mm rifles should be attached to the lead company and the 75mm rifles placed in general support near the lead of the main body. The speed of the movement necessitates the need for antitank protection to the front and the rapid employment of these weapons. This can best be done by having the 105mm rifles attached to the lead company ready to go into action. If the threat is on a flank, use the 105mm rifles interspersed in the center of the column with the 75mm rifles near the lead of the main body.

Now, consider a **"Normal" Battalion Attack.*** For example: We have an interior battalion with a platoon of tanks attached moving from the line of contact on what can be considered a normal front. Positions are available for both the 105mm recoilless rifles and the 75mm recoilless rifles. Limited cross country movement is possible for wheeled vehicles since several secondary roads and trails run forward in the battalion zone. If a tank threat exists, the 105mm recoilless rifles should be employed in **general support** to cover tank approaches regardless of what formation the battalion may use. The 75mm recoilless rifles should also be in **general support,** but would provide close fire support. If no tank threat exists, the 105mm recoilless rifles should provide close fire support to the attack.

Let's see what happens when an interior battalion operates in a wide zone. Assume that its attached tanks have been further attached to the rifle company making the main effort. Because of the terrain, single positions for the recoilless rifles are not available. Cross country movement

The 105mm Recoilless Rifle is limited standard. It will ultimately be replaced by the more powerful 106mm Recoilless Rifle M40. The latter is under test. The date of its issue to using units is, of course, unknown at present. While units will find the 106mm Recoilless Rifle a more powerful weapon capable of greater flexibility, the principles stated in this article will remain the same.—Editor.

* By "normal" we mean usual, with little to distinguish it from numerous other battalion attacks.

for wheeled vehicles is limited, because few trails and roads exist in the zone of action. Positions that will enable the weapons to support the atack by fire may not cover likely tank approaches. Always remember, if a tank threat exists, regardless of the formation, the 105mm recoilless rifles should be used in **general support** and must cover tank approaches. The 75mm recoilless rifles will usually be attached to the lead company. In absence of a tank threat, the 105mm recoilless rifles will afford close support. If two companies are attacking, the commander might weight his attack by attaching the 105mm recoilless rifles to one of his companies. The same is true with the 75mm recoilless rifles.

In a night attack, employment of the recoilless rifles is limited only by the amount of illumination available.* The weapons will usually occupy their firing positions during hours of daylight in order to obtain accurate firing data. Initially, the platoon can be expected to be in **general support.**

Once the objective is taken, a section of 105mm recoilless rifles should be attached to each attacking rifle company during the reorganization and consolidation phase. An adjustment in tactical employment may be necessary after moonrise, when more artificial illumination is provided or after daylight. If a battalion makes a night attack and passes through another battalion, the recoilless rifle platoon should be placed in **general support** if adequate firing positions are available. If not, the recoilless rifles should be on carrier in the attack position prepared to displace on order.

* Natural or artificial illumination.

The employment of the recoilless rifle platoon in wooded areas. During the entry phase, the 105mm recoilless rifles will be used to provide antitank protection and close and continuous support to the battalion. Once inside the woods, avenues of approach should be covered by the 105mm recoilless rifles while the 75mm recoilless rifles provide close fire support (the amount of support would depend on the density of the wooded area). The 105mm recoilless rifles should be kept in **general support.** Terrain, however, may make it necessary for them to be attached. Because of limited visibility and fields of fire, the 75mm recoilless rifles may be placed in **direct support or attached.**

Another special operation is the attack of a river line. In this type operation, the 75mm recoilless rifle section should be attached to the company making the main effort or having the best fields of fire. The 105mm recoilless rifle sections should initially be employed in **general support.** The terrain may limit the use of these weapons in an antitank role. If this is true, point targets may be engaged on the far bank of the river, such as automatic weapons, emplacements, and bunkers.

Since the 105mm recoilless rifles are vehicular mounted, they must cross on a raft or bridge. The usual priority of vehicles within the battalion is ammunition, 105mm recoilless rifles, medical, communication and command and reconnaissance. If a tank threat exists on the far bank, the 105mm recoilless rifles should cross first. The weapons of this platoon then cover the reorganization

and consolidation phase. Once this phase is complete, the platoon should be employed as it would be in any "normal" ground attack.

There are probably a number of questions concerning this new platoon that still require answers . . . but many of these questions will be answered when the new weapon and new platoon techniques become more generally employed by Infantrymen.

The recoilless rifle platoon is more important today than ever before. The future success of our Infantry in combat may depend, to a great extent, on the manner in which the recoilless rifle is used. This weapon is capable of dealing a devastating knockout punch—we MUST know how and when to use it. The recoilless rifle . . . the Infantry's personal artillery . . . it's the ace in the hole.

GRENADIERS

"Take a good look at your primary weapon, men. It's a hollow cast-iron ball, nothing more. We fill it with black powder and attach a fuse. Now we have a hand grenade. Any questions?"

"Sir, how are we supposed to throw it?"

"All right, I'm getting to that. You light the fuse with a slow match, whirl it around your head to speed up the burning of the fuse, and toss it. And get rid of it or it'll go off in your hand. You men have been picked to be grenadiers. It's dangerous duty, but it means you're the best in the King's Army."

You are listening in on a Seventeenth-Century training class on the use of the grenade. Since this treacherous weapon was heavy and quite likely to explode before it could be thrown, the men were chosen for outstanding bravery and strength.

During the Eighteenth Century improvements in firearms made the grenade practically obsolete. But the grenadiers, tall and strong, lived on for years in the armies of Europe as an elite corps of Infantrymen.

With the introduction of high explosives in the 1880's came the return of the hand grenade, this time as an efficient, deadly weapon. In both the defensive and offensive warfare of World War I, World War II and Korea the descendant of the ancient grenades has often dominated the battlefield. Caution and safety are still emphasized in training, but the element of danger has been largely eliminated for the man who has learned to use the grenade properly.

It was named after the pomegranate (from the Latin: granatos) because of its original shape. Today's grenade, however, more closely resembles a lemon. Like most of the U. S. Infantryman's basic weapons, it has had a long history since its crude, inefficient beginnings. The grenadier was a specialist, while the Infantryman is a versatile fighter. Today the grenade has taken its place as one more important weapon in our arsenal.

—Mr. Norman S. Poser

It's Plainer IN PLASTIC

Capt Richard D. Wolf

INADEQUATE or insufficient training aids can prove a serious handicap to instructors, particularly those on civilian component duty.

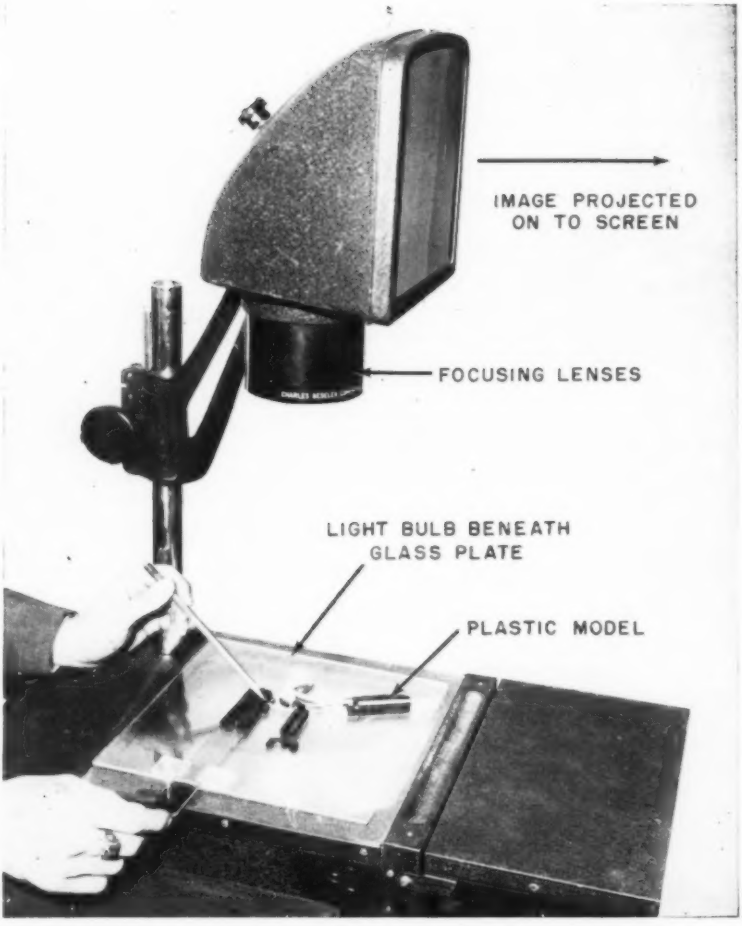
For example: Take the case of Lieutenant Jones. Jones is scheduled to present a class on the functioning of the automatic rifle to a group of reserves in Average City, U.S.A. (Average City is, of course, only 50 miles from his headquarters at Fort Blank.) If he is lucky, his headquarters had access to some of the large wooden working models used with this subject.* If this is the case, he is faced with the problem of transporting these bulky models as well as storing the giants when they aren't in use. If his headquarters does not have access to one of the wooden, working models, Lieutenant Jones' problem increases. "How," he asks, "can I effectively explain this complicated subject without using training aids?"

The solution to Jones' problem is the small scale plastic working model created by WO Robert E. Knight which is used with a Vu-Graph machine (Fig. 1). Light in weight, approximately 10 x 10 inches in size and capable of being carried in a briefcase, the parts of these models are cut from different colored plastic which makes them easy to identify.

These plastic models are capable of duplicating and depicting all the steps in the functioning cycle of a weapon. They have all the camming surfaces, guide grooves and locking recesses found on the actual weapon. The Vu-Graph operator (principal or assistant instructor) moves the parts as desired to simulate the action normally associated with the part or parts.

Just in case you're not familiar with the Vu-Graph machine, let's

* Most of us are familiar with the large wooden working models that are now in general use as training aids to explain the more complicated phases of functioning in weapons training. Field Manuals 23-5 and 23-15 have detailed drawings for their construction.



a. Place the plastic model on the glass base of the Vu-Graph machines.

digress for a moment to explain briefly how you use it:

1. Place the transparency, or in this case our plastic model, on the glass base of the machine. (See A).

2. Flip the switch which lights a bulb beneath the glass plate. This illumination reflects the image of the

model through the prisms in the hood above, which in turn, projects the image to the screen.

Remember that transparent, colored, objects are projected in color on the screen. Thus the colored parts of, let us say, the trigger housing group of the M1 Rifle all show clearly and distinctly on the screen. (Opaque or solid objects are projected as silhouettes.)

As the instructor, you will know at which phase of the functioning cycle you desire to start. You merely set the model at this phase, turn on the machine and move the model's parts to demonstrate while the student follows the process on the screen.

The size of the picture on the screen can be adjusted to accommodate the class. No longer is it necessary for students in the rear of a room to use the "squint and guess" method to determine what is happening up front. The size of the projected image is limited only by the size of the screen or by the amount of blank wall space available. (See B).

Storage and maintenance are no longer problems when the plastic models are used. In place of a training aids building or perhaps the cellar of some armory, the bottom drawer of a desk is adequate. As for maintenance, a damp cloth is all that is necessary to keep them clean, and because colored plastic is used, painting and repainting are eliminated.

As an Infantry School instructor, Capt Wolf has used the plastic training aids he writes about in many of his classes. He received his commission through OCS in 1945. Prior to his present assignment, he served as a company commander in the 5th Cav Regt, 1st Cav Div in Korea.

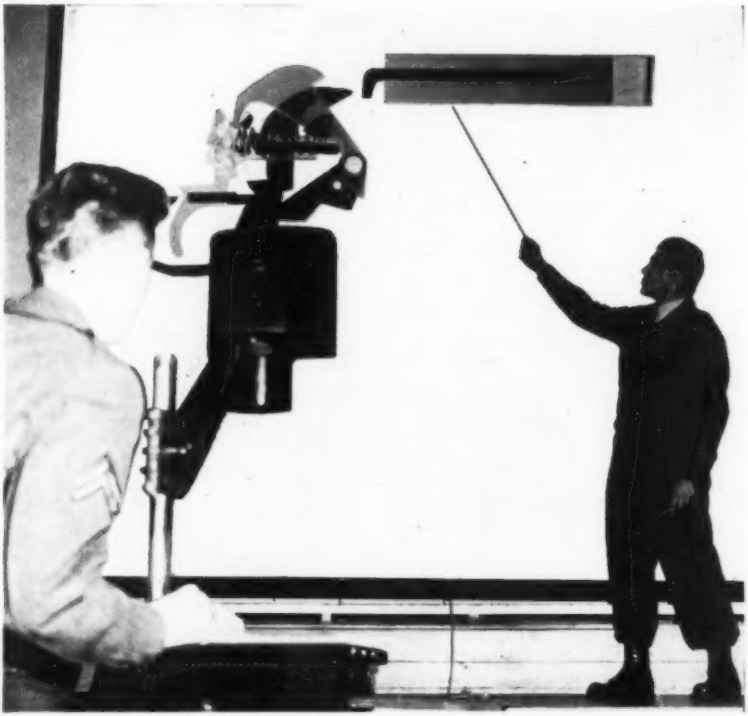
And now for the most important thing . . . their instructional value. Every new gimmick must prove to be of instructional value before it becomes a Grade A Training Aid. For many reasons the new plastic models are unsurpassed in instructional value.

Let's consider some of the advantages gained by using this type training aid:

1. Plastic working models have an advantage over photographs or charts, because they provide animation. The different phases of the complex functioning cycles in weapons instruction can be demonstrated at a speed controlled by the instructor and, if any step in the instruction should prove confusing, the model can be stopped and the step carefully explained. Also, the action can be repeated more slowly until the instructor is satisfied that confusion is eliminated. This capability is a definite advantage over a training film, which often moves through a subject at a speed far above the average student's grasp.

2. By using colored plastics to represent the different parts of a model, the student is able to visualize more clearly the position of each part in the assembled group and can easily understand the actions of these parts in the functioning cycle.

3. The plastic models can be either simple or complex depending upon the type of class and level of instruction desired. Simple models may be used to present one step in functioning or even a portion of one step, while the more complex models will effectively illustrate an entire functioning cycle.



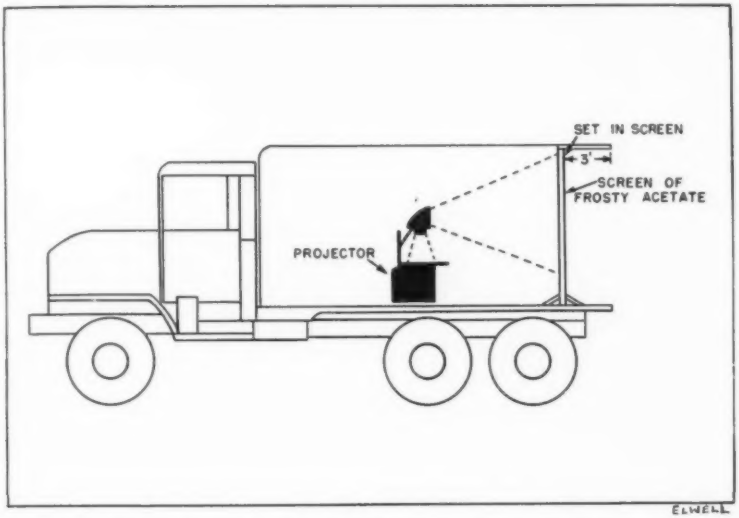
b. The size of the projected image is limited only by the size of the screen or the amount of blank wall space available.

4. The plastic models and Vu-Graph may be used without blacking out the classroom. The screen or wall space used for the projection should be darkened or shaded if possible, but a blacked-out room is not a must.

The plastic models may also be used in outdoor areas by installing the Vu-Graph in the rear of a 2½ ton truck and projecting the image on a large piece of frosted acetate. (See C). The power to operate the Vu-Graph in these outdoor areas is supplied by a portable generator, PE 75.

5. In addition to the advantages listed, the new models are eco-

US Army Photographs for this article taken by Pvt Thomas E. Lenhart.



c. When the Vu-Graph machine is installed in a 2½ ton truck, the plastic models can be shown out of doors.

nomical. In a cost conscious Army this factor cannot be overlooked. Current training aids catalogues list the prices of various wooden working models in a range between $50 and $125. The most expensive of the plastic models can be purchased for a fraction of the cost of the cheapest wooden working model. If your training aids funds are already at rock bottom, sharpen your pocket knife, purchase an inexpensive coping saw, a few cents worth of colored plastics and build your own.

The mechanical training phase of weapons instruction is only one of the many ways this versatile training aid can be used. It might also be used to demonstrate some of the more complicated phases of automotive or communication instruction. The capabilities of plastic models are limited only by the ingenuity of the instructor who uses them.

We don't say that the new plastic models will completely replace the olden wooden working models, but we do say, regardless of your subject —It's Plainer In Plastic.

According to the information available to us plastic models will soon be available through Army Area Training Aids Center via normal training Aid Supply channels.—Editor

more on patrol support

IN TERRAIN that drops out of sight 50 yards in front of the MLR or disappears behind a heavily wooded finger, the support of a patrol poses quite a problem.

One way of solving this problem is the leapfrog method by which the patrol carries along its own support. This method was used successfully in Korea.

CAPT GUSTAVE G. TOTH

'Leapfrogging,' fire planning *and* briefing, the author says, will increase the efficiency of patrol missions

Here is a typical situation: 600 meters separate our MLR trenches from those of the enemy. Both lines are just off the forward slope of the dominating ridges. In between, fingers and deep draws reach down toward each other and the valley floor. Any probe or attack by either side would require the control of this valley. The mission then is to keep the enemy from using this valley, prohibit any build-ups in the hidden draws, intercept and destroy his patrols and, whenever possible, capture prisoners.

The problem of patrol support is of great interest to every Infantry commander in the field. Maj. James E. Chrietzberg's article, "Fire Support for the Combat Patrol," which appeared in the January issue of the Quarterly has drawn many comments. Captain Toth, who was S2 and S3, 2d Battalion, 224th Infantry, presents some of the patrolling problems his unit faced and the solutions that were worked out.

—The Editor

Whether on a reconnaissance or a combat mission the patrol is divided into two identical groups* that can provide support for each other. (See Figure 1). The first group leaves the MLR and moves to Objective 1. The second group moves out 30 minutes later, passes through the first group and sets up at Objective 2. Group one is in position to give group two close-in fire support while group two is moving. Group two then supports group one as it passes through Objective 2 on to Objective 3. By this leapfrog method, each group's movement is covered by the other group acting as a support element. These are the simple mechanics of the leapfrog method.

This close-in support is not the only support available to these patrols. Before each mission a coordinated fire plan is worked out, including the company's machine guns, 57mm recoilless rifles and 60mm mortars; the battalion's 81mm mortars; the regiment's 4.2-inch mortars; and supporting artillery's 105mm howitzers. Each of these weapons has a specific task in the support plan of this patrol.

In case of contact with an enemy patrol, the machine guns on the MLR immediately isolate the

* As a general rule, splitting a patrol is not advocated because of control difficulties.

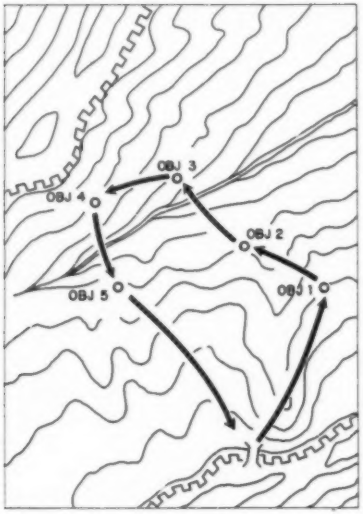


Figure 1

action by firing to either side of the friendly patrol's two groups. The 75mm recoilless rifles fire on any automatic weapons that might open up from the enemy MLR. The patrol itself can adjust the 60mm mortar concentrations. Battalion FSCC can call in the 81mm mortars on the enemy MLR to further isolate the action. The 4.2's and 105's are ready on call to fire counter-mortar and counter-battery fires in case the enemy opens up with its own high-angle fires. Then the patrol's two groups can maneuver and flank the enemy patrol. The two groups also can support each other by fire.

Communications are an integral part of the patrol mission. Both groups in the patrol are connected by separate TS-10 (sound power) lines to the company CP. Using wire on a patrol is a highly unusual procedure, but it has been used successfully over comparatively short distances. Each patrol carries an AN/PRC 6 radio tuned in on the company net. As an added precaution they carry various flares for signalling. The patrol rehearses its mission at least twice in daylight and once at night before going out. All the fundamentals of patrolling are reviewed. The rehearsals are conducted on terrain similar to the objective.

The patrols are further aided by intelligence derived from previous patrols in what are called geographical "debriefings." The information gained in these "debriefings" is plotted on a terrain chart, making it possible for subsequent patrols to

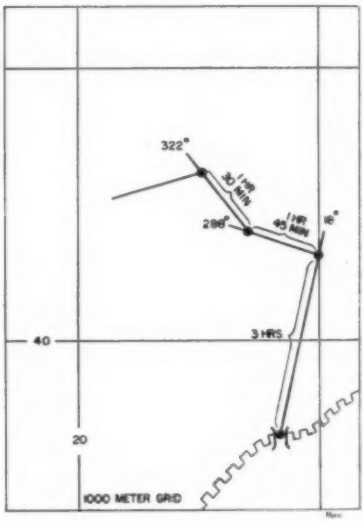


Figure 2

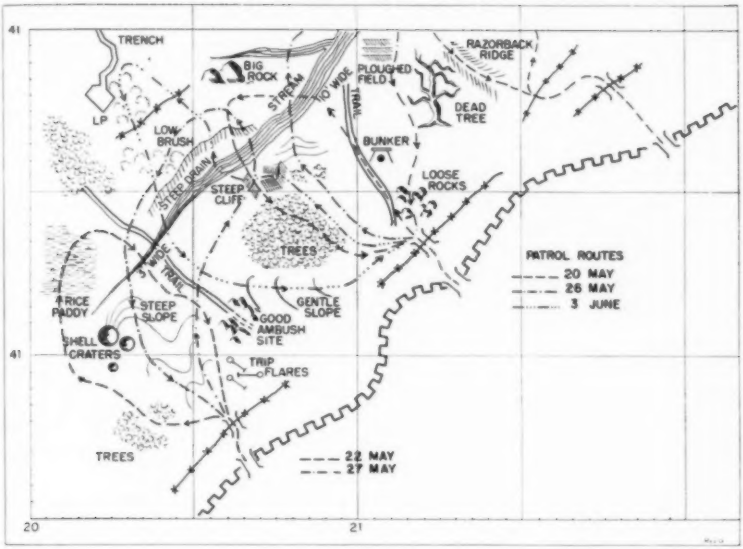


Figure 3

take advantage of the experience and knowledge gained.

While rehearsing, the patrol learns to move at the same rate regardless of terrain. To do this, movement is timed on the most difficult type of terrain that will be encountered and a rate is established. We found that a patrol at night can travel with maximum efficiency at the rate of 100 meters in 30 minutes. This includes the necessary stops to maintain security. Once the patrol establishes this rate of movement it proceeds at the same rate even on terrain that would allow faster speeds. In this way the CP can determine the distance the patrol has traveled at any given time. The exact location of the patrol can therefore be plotted as it moves along on a magnetic azimuth from a known position. Subsequent changes in direction are recorded and by plotting each change and the time interval between changes, the exact position of the patrol is known at all times (see Figure 2).

This route is then plotted on an acetate covered, gridded, 1:3000 scale board. When the patrol returns from its mission it is debriefed for geo-

---

Capt Toth, a '43 graduate of OCS, wrote this article in the pre-dawn hours between fire missions and patrol activities in the Punchbowl sector of Korea while serving as the S-2 for the 2d Bn, 224th Inf Regt. He attended Guerilla Warfare School in 1951 and is now on Reserve status.

graphical as well as tactical information. A description of the actual route taken is drawn on the terrain chart and all additional information is drawn in. After successive patrols have been plotted the terrain chart gives an accurate pictorial description of the terrain in front of the MLR (see Figure 3). This chart is then used in briefing other patrols that will travel through the same area.

The organization of the patrol into two groups, the coordinated fire plan and the complete preparation and briefing with the use of the terrain chart, all add up to support. A well supported patrol means effective missions successfully accomplished.

Publication of this article is not necessarily to be interpreted as reflecting the thought of The Infantry School or The Infantry School Quarterly.

Answers . . . to the Quiz

Possible Score	100 points
Expert	90-100
Sharpshooter	75-89
Marksman	55-74
Recruit	30-54
Bolo	0-29

For complete detailed discussion check the reference listed with each of the answers below.

QUIZ ANSWERS

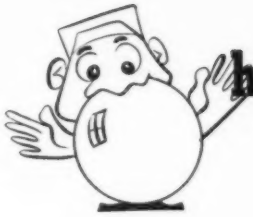
1. a. A bolt latch. (FM 23-65, par 33).
2. c. (par 5b(3), SR 210-50-1).
3. Bolt, barrel and barrel extension. (See FM 23-55, Jul 1945, par 33b).
4. You would move your rear sight 3 clicks to the left. (FM 23-5, pars 120a and 121b).
5. c. (T/0&E 7-17).
6. d. (FM 7-10 par 236).
7. c. (JANAP-134 Apr 48).
8. d. (DA TC 34, Chap 4, pars 39-40).

In The Next Issue . . .

"Suddenly, as the troops neared the center of the clearing" . . .

AMBUSH!

Don't miss this exciting and revealing article!
Watch for **AMBUSH** in the October Quarterly . . .



how would YOU do it ?

Lt Col Seymour L. Goldberg

Read the situations, study the sketch and see if you come up with Colonel Goldberg's solutions to these tactical problems.—The Editor.

SITUATION 1.

You are platoon leader, 1st Platoon, Company A, 43rd Infantry which is manning a general outpost. The enemy is not in contact but is known to be moving toward the position. The enemy has a preponderance of rifle units reinforced with some armor. Neither side has air superiority.

Your company commander orders you to block the main road leading into the regimental position. Your mission is to delay the enemy and to inflict maximum casualties without engaging him in close combat. You are authorized to return to the regimental position on your own initiative.

PROBLEM 1.

What additional weapons equipment and personnel will you request, if any?

SITUATION 2.

All your requests were granted. You arrive in the general area where the road block is to be established. You note the 4 areas, 1, 2, 3, 4 (fig. 1), each of which offers adequate space in which to set up the road block. You observe that it is 250 yards between hill C and hills A & B, and that it is the same distance between hill H and hills F & G. It is approximately 1250 yards between each area.

PROBLEM 2.

In which area will you establish the road block?

SITUATION 3.

You have made your decision and are now working out the details for the road block.

PROBLEM 3.

How will you organize your road block? What obstacles will you use and where will you place them?

SITUATION 4.

At 1000 an enemy convoy was observed moving across hill D, which is about 1000 yards forward of position 1. It consisted of trucks, light vehicles

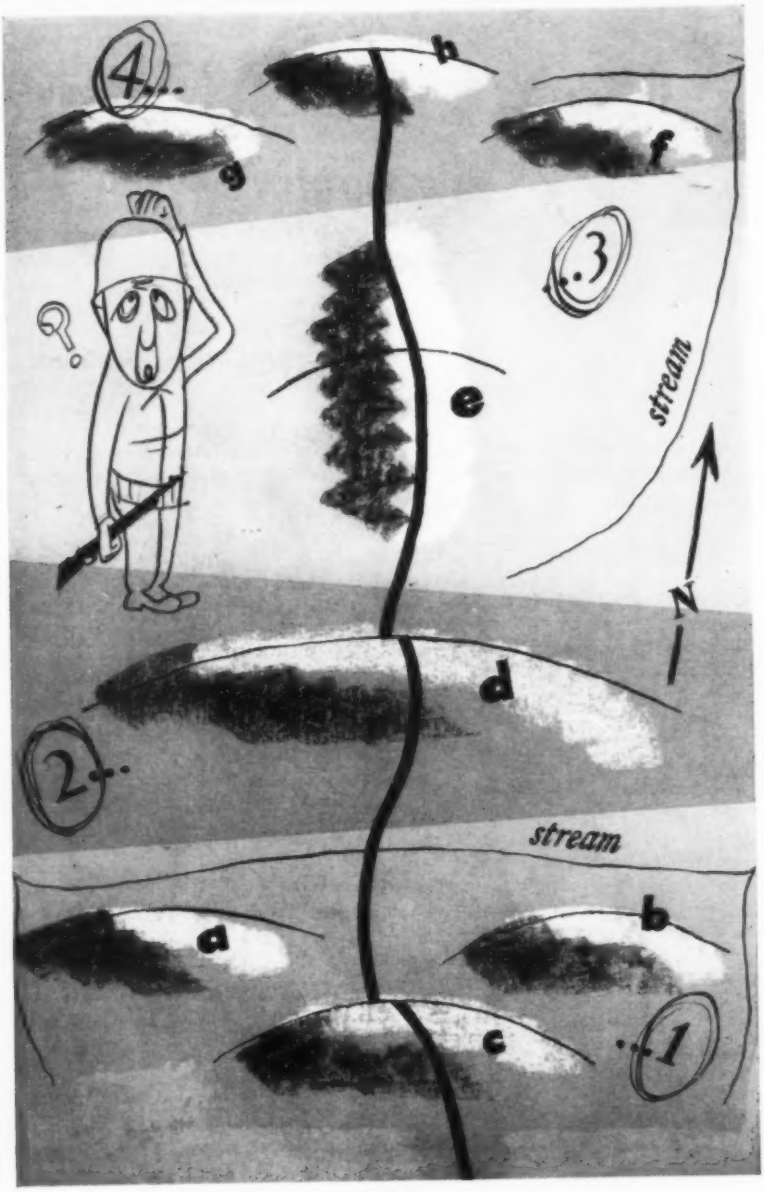


Fig. 1

(jeeps) and two tanks, and was estimated to be a reinforced enemy company.

PROBLEM 4.

Describe the action conducted by your roadblock.

SITUATION 5.

Your fire destroyed several enemy vehicles including two tanks, which were burning in the road, and you killed and wounded a number of the enemy. All the enemy moved back behind hill D. Enemy reconnaissance parties were seen on hill D. At 1130 the enemy company attacked along the road. The attack was supported by mortar fire and by the fire of 2 additional tanks which were observed on the crest of hill D.

PROBLEM 5.

What would you do?

SITUATION 6.

Your fires halted the enemy on the slopes of hill D, but the firing continued. At 1300, 120-mm mortars began registering on the position. The observation post on the left flank of hill A observed about 2 enemy platoons moving in his direction. These enemy were taken under fire but continued to advance. At 1400 they were 400 yards from hill A. At this time the enemy on hill D opened a heavy fire and resumed their advance. You ordered a withdrawal.

PROBLEM 6.

How will you conduct your withdrawal?

SOLUTIONS TO PROBLEMS

1. You request 3 tanks to give you armor support and provide a means of transportation for your squads; a section of 81-mm mortars with forward observer to provide a heavy volume of long range fire; 1 caliber .30 light machine gun, so each squad may have a light machine gun attached to it, 1 caliber .50 machine gun with 4 man crew for fires at long ranges against trucks; 2 men from the AT mine platoon to advise on laying mines for at least 100 yards of mine fields; wire; 1 PRC 6 radio per squad; one PRC 10 radio for communications with the company and sufficient vehicles to motorize all foot elements. (See Problem 1).

2. You pick area 1 for your roadblock because it is astride the road that hill C blocks. Also, it permits flanking fire from hills A and B and makes possible a degree of surprise. The hills permit mutual support and units on hill C can cover the withdrawal from hills A & B. You also note that area 1 has a small network of streams to its front and flanks affording an obstacle protecting the position. In area 4, hill H blocks the observation from hills G and F. Hill E, along the road, would not permit you to place all your fires against the

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Lt Col Goldberg, a 1942 OCS graduate, is now an instructor in the Infantry School's Tactical Dept. During WW II he was assigned to the 393rd Inf, 99th Division in Europe. He served as a Bn Ex O during the battle of the Bulge. In Korea he was an Asst G3, 10th Corps, and a Bn Commander in the 32d Inf, 7th Div.

enemy. Area 2 would be the second choice; but here the main objection is the placing of all units on line, lessening the chance of surprise. It also reduces the amount of flanking fire and provides no unit in place to cover a withdrawal. (See Problem 2).

3. You place one squad on each hill. Each squad has a tank and a light machine gun attached. The squad on hill C also has the Cal. .50 machine gun attached. The 81-mm mortars are placed behind hill C. Antitank minefield mixed with AP mines is placed in the draw between areas 1 & 2 about 500 yards forward of hill C. This minefield is so located that all tanks can cover it. Wire and AP mines are placed around all three hills, with hills A & B having first priority. You place your CP OP on hill C, where you are centrally located. (See Problem 3).

4. You order fire to be placed on the enemy convoy when the lead vehicle is in the vicinity of the minefield, permitting a large portion of the convoy to be on the forward slopes of hill D. Initially you have two of your tanks engage the two enemy tanks immediately. Have the 3rd tank engage the tail of the column and initially have the cal. .50 machine gun concentrate on the front of the column. After the two enemy tanks have been knocked out your two tanks can then begin firing on the head and rear of the column. At the same time, all other weapons fire on enemy personnel, delivering a large volume of fire while they are still on the vehicles and continuing it as they move back. (See Problem 4).

5. You continue to hold your position, placing your maximum fires on the enemy. He still apparently does not know where you are. He is attacking the platoon frontally where we will be able to cause him maximum casualties without affording the enemy a good avenue of approach into our position. (See Problem 5).

6. The rifle squads on hills A & B will withdraw first covered by the tanks and machine guns on hills A & B, and by all elements firing from hill C. They will move to the truck which carried the mines and wire, which is now empty. When the rifle squads from hills A & B have gotten well to the rear, the tanks and machine guns from these hills will move to hill C to cover the withdrawal of all other elements including the 81-mm mortars. Finally, all foot elements on hill C will mount the tanks and they will withdraw last down the road. It may be necessary to withdraw them one at a time, depending on enemy pressure. (See Problem 6).

on the move

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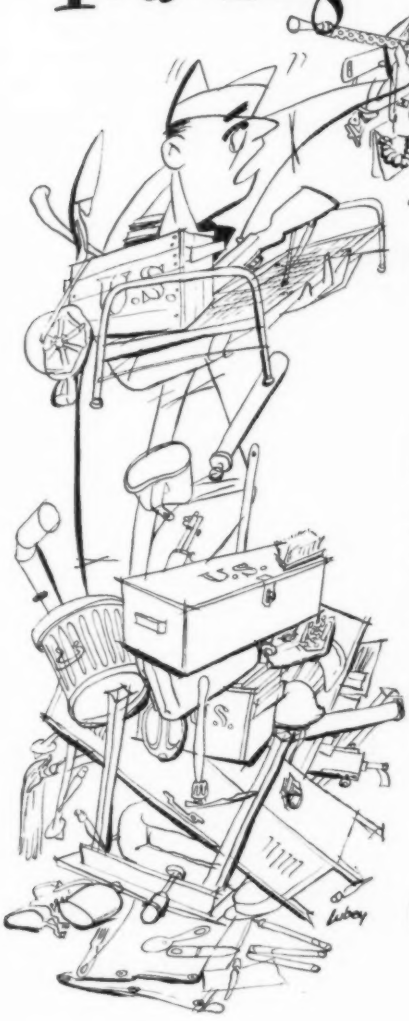
loading made easy



GETTING ALL the equipment of the Infantry regiment on wheels is a problem of major proportion. We need **planning** and a **simplified method of making loading plans** to successfully solve this problem.

This article tells **you** how this can be done . . . quickly and efficiently.

Recently, The Infantry School conducted some tests which highlighted the fact that there is a tremendous amount of equipment in the Infantry regiment. So much, in fact, that

Lt Col Reginald C. Frizzelle
and
Maj Robert A. Scruton

T/O-E 7-17

SECTION III — EQUIPMENT

PAR	LINE ITEM NUMBER	ITEM DESCRIPTION		STRENGTH FULL	STRENGTH REDUCED	CADRE	AUTH	REMARKS
1	2	3		4	5	6	7	8
		INFANTRY RIFLE COMPANY						
		SRC 07 017- 2 00-		1	2	4		
01		COMPANY HEADQUARTERS						
	108100	DECONTAMINATING APPARATUS PORTABLE 3 GALLON M1		3	2			600
	117750	KIT CHEMICAL AGENT DETECTOR M9A1		1	1			600
	126600	MASK PROTECTIVE FIELD M9A1		25	20			
	222750	COMPASS LENSATIC LUMINOUS DAMPED 5 DEG-20 MIL GRAD W CASE		3	3			800
	236070	GLASS MAGNIFYING SELF ILLUMINATED 2 INCH DIAMETER 5 POWER		1	1			
	251450	METASCOPE TYPE US-F		4	4			
	273200	SNIPERSCOPE B08 JONES		6	6			
	402813	BAYONET M1 W/SCABBARD M7	SNL B-8	25	16			301
	403201	BAYONET KNIFE M4 W/SCARBARD M8A1	SNL B-8	4	4			303
	403977	BINOCULAR M13A1	SNL F-210	3	1			804
	*406893	CARBINE CAL 30 M2	SNL B-28	4	4			
	409409	CHAIN TOW 7/16 IN X 16 FT	SNL J-17	1	1			505
	410864	DEMOLITION EQUIPMENT SET NO 5 INDIVIDUAL	SNL R-7	1	1			
	*417460	GUN MACHINE CAL 50 BRG M2 HEAVY BARREL	SNL A-39	1	1			
	421345	LAUNCHER GRENADE M7A2	SNL B-39	2	1			244
	421345		OR	20	15			602
	433174	MOUNT TRIPOD MACHINE GUN CAL 50 M3	SNL A-39	1	1			
	433756	MOUNT TRUCK PEDESTAL M31C	SNL A-55	1	1			
	*441031	RIFLE AUTO CAL 30 BRG M1918A2	SNL A-4					
	441031		OR	9	9			603
	*442195	RIFLE U S CAL 30 M1	SNL B-21	25	16			
	484311	TOOL SET ARMORERS	SNL J-10	1	1			
	*474511	TRAILER CARGO 1/4 TON 2W M100	SNL G-	2	1			
	*474695	TRAILER CARGO 1 1/2 TON 2W M104	SNL G-	1	1			
	*484804	TRUCK CARGO 2 1/2 TON 6X6 M35	SNL G-	1	1			814
	*486442	TRUCK UTILITY 1/4 TON 4X4 M38A1	SNL G-740	4	1			
	488464	WATCH WRIST 7 OR MORE JEWEL	SNL F-36	4	1			807
	488464		OR	8	2			808
	502153	ATTACHMENT PACKRD PLYWOOD CARGO		10	10			
	502153		OR	40	40			800
	502539	AXE CHOP SINGLE BIT WGT 4 LB W/HANDLE		3	1			514
	502990	BAG CANVAS WATER CARRYING 5 GAL COMP		5	5			600
	503102	BAG CANVAS WATER STER POROUS COMP W/SUSPENSION ROPES AND COVER		2	2			
	503121	BAG CARRYING AMMUNITION		2	1			
	503121		OR	38	37			403
	512211	BUCKET GEN PURPOSE METAL GALV MV WGT W/O LIP 14 QT		2	1			
	514208	CAN CORR NEST GALV W/COVER 10 GAL		1	1			
	514229	CAN CORR NEST GALV W/COVER 18 GAL		1	1			
	514250	CAN CORR NEST GALV W/COVER 24 GAL		5	5			
	514271	CAN CORR NEST GALV W/COVER 32 GAL		1	1			
	514355	CAN GASOLINE 5 GAL CAP		3	3			516
	514687	CAN WATER 5 GALLON		41	20			
	516455	CARRIER WIRE CUTTER M-1938		25	20			
	522445	CLOCK ALARM		1	1			
	524660	CONTAINER FOOD INSULATED M-1944		7	4			
	528035	CUTTER WIRE M-1938		25	20			
	528582	DESK FIELD EMPTY FIBER COMPANY		1	1			
	528615	DESK FIELD M-1945		1	1			
	534489	FLAG GUIDON BUNTING		1	1			
	535342	FLY TENT WALL LARGE COMP W/PINS AND POLES		1	1			518
	538886	GOGGLES M-1944		6	3			538
	541645	HEATER IMMERSION TYPE FOR CAN CORRUGATED		4	4			
	547055	KIT BARBER W/CASE		1	1			601
	549518	LANTERN GASOLINE LEADED FUEL		2	2			
	555186	MATTOCK PICK W/HANDLE WGT 5 LB		1				521
	559471	OUTFIT COOKING ONE BURNER M-1950		15	15			601
1	2	3		4	5	6	7	8

Figure 1—Shown here is Page 8 of the current Infantry Rifle Company T/O&E, 15 May 1952, as published by Department of the Army. Study this page for a minute or two to get an idea of its information and format.

it takes a carefully planned loading scheme to get it all on the regiment's vehicles.

The purpose of these recent tests was not to recommend elimination of some of this equipment. The main idea was to accumulate all the Regimental T/O&E equipment, plus basic loads of ammunition, fuels and lubricants, put it on the various trucks and trailers and then decide if the trucks and trailers were satisfactory for the loads they had to carry. The conclusions drawn from these tests are not vital to this article but how they were arrived at ties in very closely.

To perform these tests accurately one essential document was needed: a good, sound, up-to-date Unit Loading Plan that said in black and white, "what vehicle this goes on and what trailer that goes on." But embarrassingly enough, no such document was on file; nowhere could there be found a paper that stated, "This is a current guide for Vehicle Loading."

Necessity is often the mother of invention, so a Regimental Loading Plan was produced overnight—well, almost overnight—by use of a "gimmick" or short cut that eliminated nearly all the clerical work and mass of details that normally are included in such a plan.

The usual way to prepare a Loading Plan is to transpose the entire T/O&E to a chart or other format, then break down and assign the thousands of items of equipment to the specific vehicles on which they are to be transported. There is nothing wrong with this method except that it takes a lot of time, labor and paper, and is unhandy to keep up-to-date as changes occur in the T/O&E.

Why take the time and trouble to transpose all those thousands of line items of equipment? Why not leave them on the printed page of the T/O&E just as they came out of the Government Printing Office? (See Figure 1).

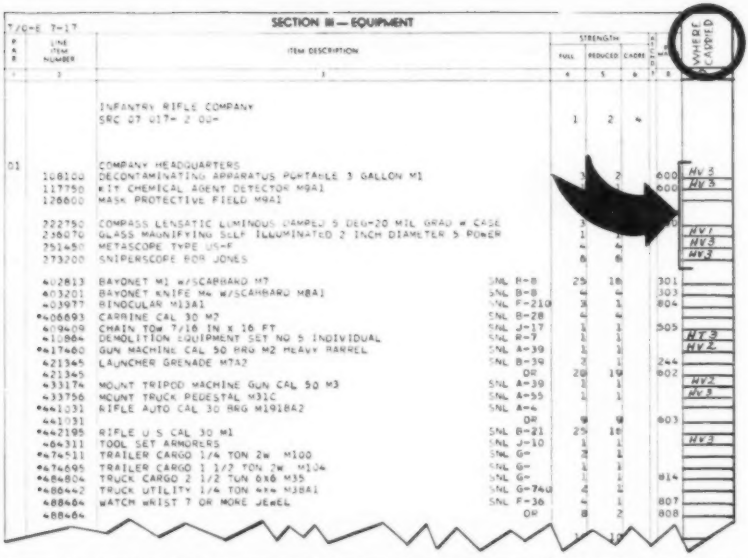
Now look at Figure 2. At first glance it may seem the same as Figure 1. It is exactly the same—with one exception. An extra column has been added locally (not by D/A). This column is headed "Where Carried" and designates the vehicles in which a particular item of equipment is to be carried. This is the "gimmick" or short cut mentioned previously.

The next step is to put additional information in the supplementary column . . . the vehicle designations. In Figure 2 you will see how this has been done . . . briefly and concisely. Since this is new, however, some explanation is in order.

First, note that we are dealing with the Company Headquarters part of the T/O&E. About half way down the page you will see that Company Headquarters has three vehicles and three trailers, two jeeps and their trailers and a 2½-ton truck and its 1½-ton trailer. Now a convenient, abbreviated way to designate these is as follows:

HV1 means Co Hq Veh #1, ¼ T
HT1 means Co Hq Tlr #1, ¼ T
HV2 means Co Hq Veh #2, ¼ T
HT2 means Co Hq Tlr #2, ¼ T
HV3 means Co Hq Veh #3, 2½ T
HT3 means Co Hq Tlr #3, 1½ T

Now, look at the first item of equipment listed in Figure 2. It is "Decontaminating Apparatus Portable M1." Read across to the supplementary column where the code or



T/O&E 7-17 — SECTION III — EQUIPMENT

P A R	LINE ITEM NUMBER	ITEM DESCRIPTION		STRENGTH: FULL	STRENGTH: REDUCED	STRENGTH: CADRE	AUTH	WHERE CARRIED
1	2	3		4	5	6	7	8
		INFANTRY RIFLE COMPANY						
		SRC 07 017- 2 00-		1	2	4		
01		COMPANY HEADQUARTERS						
	108100	DECONTAMINATING APPARATUS PORTABLE 3 GALLON M1		3	2		600	HV 4
	117750	KIT CHEMICAL AGENT DETECTOR M9A1					600	HV 5
	126600	MASK PROTECTIVE FIELD M9A1						
	722750	COMPASS LENSATIC LUMINOUS DAMPED 5 DEG-20 MIL GRAD W CASE		1				
	230070	GLASS MAGNIFYING SELF ILLUMINATED 2 INCH DIAMETER 5 POWER		1	1			HV 1
	751450	METASCOPE TYPE US-F		4	4			HV 3
	773200	SNIPERSCOPE FOR JONES		6	6			HV 3
	402813	BAYONET M1 W/SCABBARD M7	SNL B-8	25	10		301	
	403201	BAYONET KNIFE M4 W/SCABBARD M8A1	SNL B-8	4	4		303	
	403977	BINOCULAR M13A1	SNL F-210	3	1		804	
	*406893	CARBINE CAL 30 M2	SNL B-28	4	4			
	409609	CHAIN TOW 7/16 IN X 16 FT	SNL J-17	1	1		505	
	410864	DEMOLITION EQUIPMENT SET NO 5 INDIVIDUAL	SNL B-9	1	1			HV 3
	*417460	GUN MACHINE CAL 50 HBG M2 HEAVY BARREL	SNL A-39	1	1			HV 2
	421345	LAUNCHER GRENADE M7A2	SNL B-39	7	1		244	
	421345		OR	20	19		802	
	433174	MOUNT TRIPOD MACHINE GUN CAL 50 M3	SNL A-39	1	1			HV 2
	433756	MOUNT TRUCK PEDESTAL M31C	SNL A-55	1	1			HV 3
	*441031	RIFLE AUTO CAL 30 BAR M1918A2	SNL A-4					
	441031		OR	9	9		803	
	*442195	RIFLE U S CAL 30 M1	SNL B-21	25	10			
	464311	TOOL SET ARMORERS	SNL J-10	1	1			HV 3
	*474511	TRAILER CARGO 1/4 TON 2W M100	SNL G-	2	1			
	*474595	TRAILER CARGO 1 1/2 TON 2W M104	SNL G-	1	1			
	*484804	TRUCK CARGO 2 1/2 TON 6X6 M35	SNL G-	1	1		814	
	*488442	TRUCK UTILITY 1/4 TON 4X4 M38A1	SNL G-740	2	1			
	488464	WATCH WRIST 7 OR MORE JEWEL	SNL F-36	4	1		807	
	488464		OR	8	2		808	

Figure 2—Here is Page 8, current Infantry Rifle Company, T/O&E 7-17, as altered locally by addition of an extra column headed "Where Carried." Also, the added column has been filled in with the vehicles assigned to carry the equipment.

abbreviated **HV3** is written, indicating where this item should be carried in the Company 2½-ton truck, which is sometimes called "the impedimenta truck." Using this method throughout the Company Headquarters T/O&E you should be able to readily associate the equipment with the vehicles assigned to carry it.

You will notice that not all of the equipment is assigned a vehicle code. This is the equipment normally carried by the individual. For example, look at the item "Watch Wrist 7 or More Jewel." Across the page in the Remarks Column the code **807** is shown. This code is placed there by Department of the Army and in the back of all Tables of Organization and Equipment it is explained that this item may be issued to any of the following: 1st Sgt, Plat Sgt, Sec Ldr, Comm Sgt or Rad Opr (in the case of the Rifle Company). As a matter of fact, the Remarks Column of the T/O&E can be a source of great information to the Unit Commander.

You have probably noticed, by this time, something which hasn't been explained—namely the codes **KV** and **KT**. These codes stand for "Kitchen Vehicle" and "Kitchen Trailer" respectively. This 2½-ton truck, with its 1½-ton trailer, is organic to Service Company. The equipment they carry is organic to the Rifle Company. Therefore, this "unorganic vehicle" is shown in the supplemen-

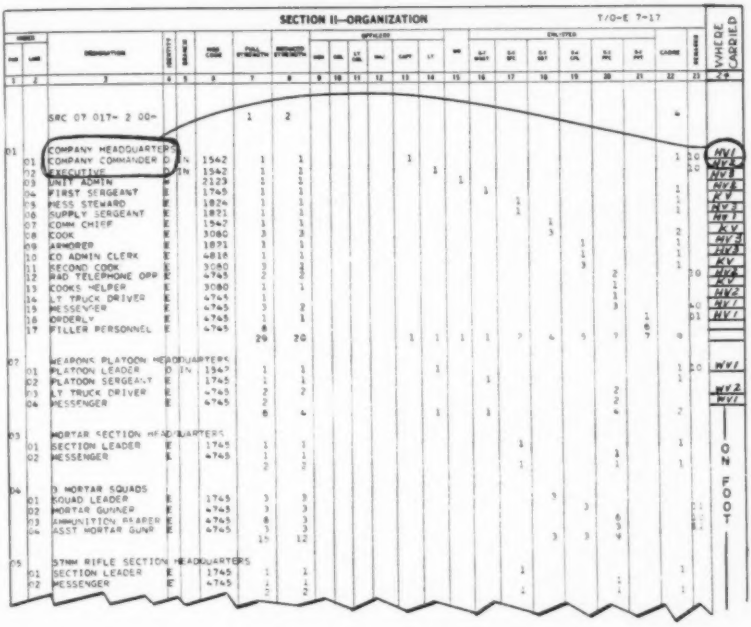

SECTION II—ORGANIZATION
T/O-E 7-17
WHERE CARRIED
SRC 07 017- 2 00-
COMPANY HEADQUARTERS
01 COMPANY COMMANDER O IN 1542
02 EXECUTIVE O IN 1542
03 UNIT ADMIN E 2123
04 FIRST SERGEANT E 1745
05 MESS STEWARD E 1824
06 SUPPLY SERGEANT E 1821
07 COMM CHIEF E 1547
08 COOK E 3080
09 ARMORER E 1871
10 CO ADMIN CLERK E 4818
11 SECOND COOK E 3080
12 RAD TELEPHONE OPR E 4745
13 COOKS HELPER E 3080
14 LT TRUCK DRIVER E 4745
15 MESSENGER E 1547
16 ORDERLY E 4745
17 FILLER PERSONNEL E 4745
WEAPONS PLATOON HEADQUARTERS
01 PLATOON LEADER O IN 1542
02 PLATOON SERGEANT E 1745
03 LT TRUCK DRIVER E 4745
04 MESSENGER E 4745
MORTAR SECTION HEADQUARTERS
01 SECTION LEADER E 1745
02 MESSENGER E 4745
O MORTAR SQUADS
01 SQUAD LEADER E 1745
02 MORTAR GUNNER E 4745
03 AMMUNITION BEARER E 4745
04 ASST MORTAR GUNR E 4745
57MM RIFLE SECTION HEADQUARTERS
01 SECTION LEADER E 1745
02 MESSENGER E 4745
ON FOOT

Figure 3—Here a section of Page 5 of the current Infantry Rifle Company T/O&E is reproduced to show the personnel who may normally ride and the added column to designate the vehicles they may ride in.

tary column. For example, read across from the last item of equipment shown in Figure 2—"Outfit Cooking One Burner M-1950." The code KV indicates the vehicle which would normally carry this item.

So far, so good. But what about the rest of the Rifle Company—the Weapons Platoon, for instance? How do you identify the Weapons Platoon with the vehicles which transports it? (See Figure 3).

The same principle of vehicle designation applies to the Weapons Platoon. Notice that the Platoon has two jeeps and trailers. Thus:

WV1 means Weapons Plat Veh #1
WT1 means Weapons Plat Tlr #1
WV2 means Weapons Plat Veh #2
WT2 means Weapons Plat Tlr #2

The three Rifle Platoons have no organic vehicles. The equipment that they may desire to transport is placed on either the Company Headquarters or Weapons Platoon vehicles.

These questions have probably occurred to you. Where do personnel ride and what about the basic load of ammunition?

For an answer to the first question, look at Figure 3. As stated in Section I of the Rifle Company T/O&E, this organization is only ten percent mobile. Consequently, relatively few people normally ride on its organic transport. However, a complete loading plan should include those few people who do.

Concerning the company basic load of ammunition—something over a ton of it—nowhere in the T/O&E will you find as much as a single round mentioned.* But a completely integrated Unit Loading Plan should include this ammunition and the vehicles which will carry it. The method for doing this is shown in Figure 4.

Thus far, this article has dealt mainly with a **method** of preparing a simplified loading plan. So, before discussing several important factors that must be considered in "thinking out" a loading plan, let's pause to see if this method has accomplished something worthwhile. This method:

1. Combines in one document complete and related information.
2. Saves a tremendous amount of time, labor and paper.
3. Makes a handy reference for the unit commander and his assistants for several different kinds of information.
4. Makes a loading plan that is easy to keep up-to-date as changes in T/O&Es occur.

Are there any "bugs" in this method? We have found one microbe. You will notice that the T/O&E is a closely printed document—there's not much space for additional information, and you must be careful that the vehicle designations are lined up evenly with their respective items of equipment. This can be done with normal care. In order to assure a neat job, you need someone who can print well from a rough working copy. As a matter of interest, it took our draftsman less than an hour to turn out a complete Rifle Company Loading Plan from our working copy. On the other hand, using the old method of making a loading plan, we transposed all the Rifle Company equipment to a chart and broke it down into the five organic vehicles. The process required 15 hours of steady work, and it is extremely doubtful if it can be done accurately and completely in substantially less time.

Since we are talking about the Rifle Company Loading Plan, it should be stated that of all the companies of the Infantry regiment, the Rifle Company is the most structurally uncomplicated and has the least equipment and the fewest vehicles. Compared to the T/O&E of Headquarters and Headquarters Company,** which has 25 pages of

Both Lieutenant Colonel Frizzelle and Major Scruton are instructors at The Infantry School. Their article was written in answer to hundreds of requests from the field for more data on loading procedure. Col Frizzelle was commissioned in the National Guard in 1935 and entered active Federal Service in 1940. He participated in both WW II and Korea. Major Scruton enlisted in the Army in 1929 and received his commission via OCS in 1943.

* The present basic load is set forth in FM 101-10, July 1953.
** (7-12, 15 May 52)

SECTION III — EQUIPMENT T/O-E 7-17

PAR	LINE ITEM NUMBER	ITEM DESCRIPTION	STRENGTH FULL	STRENGTH REDUCED	STRENGTH CADRE	AUTH	REMARKS
1	2	3	4	5	6	7	8
	605	15 ADD PER CO OS WAR TOC.					
	606	INCLUDES 1 PER RAR. WAR TOC.					
	800	MBI TO ANY OF THE FOL AS REQ: OFF, PLAT SGT, SEC LDR, COMM SGT, SQD LDR, SQUAD LDR ASST, RIFLE SQUAD.					
	804	MBI TO ANY OF THE FOL AS REQ: OFF, 1ST SGT, PLAT SGT, SEC LDR, SQD LDR, WPNS PLAT.					
	807	MBI TO ANY OF THE FOL AS REQ: 1ST SGT, PLAT SGT, SEC LDR, COMM SGT, RAD OPR -4765-.					
	808	MBI TO ANY OF THE FOL ADD PERS AS REQ: OFF, WO, WAR TOC.					
	809	3 PER CO HQ: 1 PER AMMO BEARER, LAUNCHER ROCKET, 57MM RIFLE, MORTAR, RADIO SET AN/PRC-10.					
	810	1 PER OFF, WO, 1ST SGT, MESS STEWARD, SUPPLY SGT, SEC LDR, PLAT SGT, ASST PLAT SGT, RADIO SET, TRUCK.					
	814	TO BE EQUIPPED WITH WINCH.					
	816	1 PER 8 TRUCKS OR FCT.					

AMMUNITION

HT1

3.5 HEAT 15 Rds
3.5 HEAT 3 Rds
Rifle Cal .30 M1 M1C 1632 Rds
Rifle Cal .30 BAR 540 Rds
Grenades Hand Frag 25 Rds

HT2

3.5 HEAT 15 Rds
Rifle Cal .30 M1 M1C 1632 Rds
Rifle Cal .30 BAR 540
Grenades Hand Frag 25 Rds
Gun MG Cal.50 506 Rds

WT1

60 mm Mort HE 48 rds
60 mm Mort WP 3 rds
60 mm Mort Illum 3 rds
Rifle 57 mm HE 30 Rds
Rifle 57 mm HEAT 8 Rds
Rifle 57 mm WP 4 Rds

WT2

60 mm Mort HE 48 Rds
60 mm Mort WP 3 Rds
60 mm Mort Illum 3 rds
Rifle 57 mm HE 30 Rds
Rifle 57 mm HEAT 8 Rds
Rifle 57 mm WP 4 Rds

Figure 4—The inside of the last page of the current Infantry Rifle Company T/O&E is shown here, indicating the breakdown of the basic load of ammunition to the unit's vehicles.

equipment, including 124 vehicles and trailers, the Rifle Company T/O&E has 16 pages and five vehicles. Obviously, it will take longer to prepare a Regimental Headquarters Loading Plan. However, the same principles of vehicle designation should be used.

To prepare a consolidated Loading Plan for the Infantry regiment it is necessary only to have copies of the various Company Tables of Organization and Equipment and include

them as an annex to any special instructions that may be desired to be published.

So much for the method. Now let's consider something more important . . . the reasoning that must accompany the preparation of a good loading plan.

First, **why** a loading plan?

1. Because it achieves uniformity of loading and precludes time-wasting questions of "where does this go and where does that go."
2. It tends to insure balanced loads and equitable weight distribution.
3. It eliminates hodge-podge loading, of which you may have seen some examples.

Next, **who** is responsible for preparing the loading plans? Normally the unit commander, who is the best qualified to say how his company's equipment should be loaded. The army has no centralized authority which issues detailed instructions for their preparation. However, divisions and regiments require their preparation as a matter of Standard Operating Procedure.*

Weight distribution is also an important factor to consider when making a Loading Plan. Items of equipment run from insignificant weight to very considerable weight. To put all the lighter items on one vehicle and all the heavier items on another would naturally be poor weight distribution, and, in addition, would grossly overload the latter vehicle. Overloading a vehicle, particularly on cross-country operations, shortens its life and causes it to be under constant repair when most needed. It is true that additions to the T/O&Es and basic loads have not been compensated for by either additional vehicles or increased capacity ratings of the present ones. But, it is also true that a careful regard to proper weight distribution will help to overcome this. It will not overcome it entirely, however, and at present the Infantry regiment is faced with certain cases of unavoidable overloading, especially in the ¼-ton trailers of the Rifle Companies and the ¾-ton trucks and trailers of the Heavy Mortar Company.

Perhaps the term "cross-country" operations should be explained a bit further. Tactically speaking, the vehicles of an Infantry unit should be loaded based on their cross-country payload capacity ratings, which are considerably less than their on-highway (which presumes smooth running) payload capacities. For example, the cross-country payload capacity rating of the 2½-ton truck is 5000 pounds, whereas for on-highway operation it can safely carry 8000 pounds. Also, the cross-country payload capacity rating of the ¼-ton trailer is 500 pounds, but for on-highway running it will carry 800 pounds without strain.

Another important thing to consider in making a loading plan is the tactical integrity of the load . . . which is a high-sounding phrase meaning to make sure you don't put the tactical equipment of one platoon on the vehicle of another platoon. If this were done, it might lead to delay or confusion if the unit were committed to action. Of course, if

* The Infantry School does not take a dogmatic stand on how and where equipment should be loaded, but will shortly disseminate Unit Loading Plans as a guide.

you were making an administrative move, say from one camp to another, this factor might not be so important.

As for the tactical integrity of the load, the T/O&E has already cleared that for you. The T/O&E lists the equipment conveniently broken down into platoons, sections and squads, including the vehicles and trailers.

It's true, there's a lot of equipment in the Infantry regiment. But, with these principles in mind, you are ready to make a good loading plan for your unit. The method we have outlined will assure you of a relatively brief—even pleasant and informative—stint of work. Why don't **you** try it?

'white uniforms in muddy pools . . . '

It was early summer, 1819. The fields and vegetation had turned brown . . . dust blanketed the roads and, carried by the winds, soon covered the entire landscape with a somber, dull brownish hue . . . India was in the midst of her very dry, hot season.

From the distant horizon two columns of British and Loyal Indian troops moved slowly down a narrow, dusty road. As the column progressed, the troops, dressed in white cotton or duck uniforms, stood out plainly against the prevailing dust color of the roads and surrounding countryside.

Suddenly, from the bushes, a shot rang out . . . a soldier on the end of the column dropped to the ground. The troops, in their white garments, were distinctive targets and ready prey for the bush-whacking snipers of enemy tribesmen.

This was a common occurance during the early days of the British occupation of India. Learning from bitter experience the necessity for making themselves less conspicuous, the soldiers soon began dipping their white uniforms in muddy pools and streams to give them the same color as the surroundings in which they lived and fought.

This expedient showed good results in reducing the number of casualties. Consequently, khaki (an East Indian word meaning dust color or earth color) uniforms replaced the traditional white uniforms formerly worn by the British occupation forces.

This series of apparently insignificant skirmishes brought to the fore the urgent need for a suitable and distinctive combat uniform.

Deadly necessity gradually overcame the natural sentimental traditions and stereotyped thinking that surrounded the colors of the uniforms previously worn until all the great nations of the world finally adopted khaki or some other dull-colored uniforms for field troops.—Cpl Victor D. Shroyer

The following information provides a means of keeping up-to-date on matters of professional interest.

New and Approved

Medical Company, Infantry Regiment. The medical company has been combat tested as an organic part of the Infantry regiment. This gives the regimental commander all of the personnel, equipment and means to initiate and maintain treatment and to collect and evacuate casualties. (When the company is no longer capable of functioning in this, its normal combat role, elements of the medical battalion, Infantry Division, assumes responsibility for evacuation from regimental medical facilities.)

•

Organizational Clothing and Equipment Record. DA Form 10-102, Organizational Clothing and Equipment Record, has replaced DD Form 191 and DD Form 192, formerly used for the same purpose. The new form thus can be used for both male and female personnel.

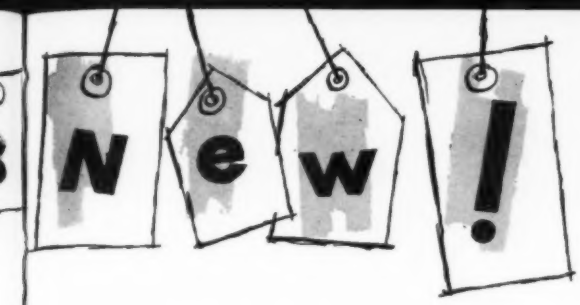
Similar in appearance to the older forms, the new one nonetheless has numerous new features. The individual's name and service number is now carried on the bottom of the first page. The procedure for receipting for issues and turn-ins has been modified by eliminating the date and initial boxes at the top of each page. Each column is now headed by a "date box."

The individual now receipts for issues by signature instead of initials. Space for signature is provided on page 4 as a part of each column. Under this system when an issue is made in a given column on page 1 only, the corresponding column must be closed out on pages 2, 3 and 4 before the individual acknowledges receipt by signing his name. In the case of turn-ins, the officer witnessing the turn-in places his signature in the manner outlined for issues, but does so in the space provided on page 4 under each column reserved for turn-ins.

•

Medical Helicopter Units are now standard in the Field Army. Equipped with five H-25 type ships, these units are used to evacuate casualties which require prompt surgery. They are operated by Army Medical Service personnel.

The effectiveness of helicopter transport is reflected in the low mortality rate among those receiving the service. The reduced travel time, as compared to surface transport, contributes greatly to the high recovery rate.



Developed!

Canned Bread for use in the five-in-one ration which is designed to supply food for five men for one day. The new white bread is equal in quality and flavor to grocery shelf bread and took nine years to develop. The bread dough is baked in the individual cans before the can is sealed. The baked bread is allowed to cool slightly and when the can is sealed the heat remaining in the can establishes an effective vacuum which aids in the preservation of the bread.

•

Dextran. A new solution to replace plasma, it (Dextran) is a volume-expander used for the restoration of fluid loss in the circulatory system. The advantages of Dextran are: (1) it is approximately 1/3 as expensive as plasma; (2) it is not processed from human blood which reduces the need for donors; (3) it is packaged in only one container which eliminates the necessity for mixing the solution in the field thereby reducing the possibility of infection; and (4) it cannot transmit the virus which causes Hepatitis (infectious jaundice).

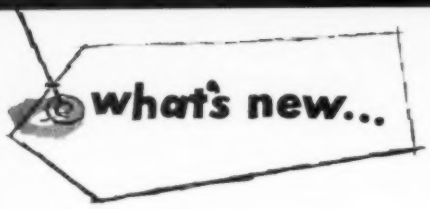
•

Rear Door Jumping From C-119 Aircraft. A modification kit has been developed to allow personnel to parachute from the rear of a C-119 aircraft when the "clam shell" doors have been removed for heavy drop missions. The kit provides an arm that extends the anchor line cable of the aircraft out over the rear of the aircraft, enabling personnel to "hook up" and follow heavy drop loads out of the aircraft.

•

Cook's Work Sheet. DD Form 407 dated 1 June 53 has replaced previous editions of the Cook's Work Sheet. The new form is an improvement over previous ones since all information is now recorded on one side of the sheet.

The new features of this form are: (1) a column for recipe numbers; (2) a column for the time meal preparation is to commence as well as the size portion to be served each individual; (3) the "remarks" column now includes space for information pertaining to the use made of leftovers, the number of portions short (if applicable), and the reason for excessive leftovers (if applicable); and (4) a final change requires the head counter to enter his count as well as his name and grade.



Being Tested

New Loudspeaker Unit designed for psychological warfare. The unit could be mounted on any army vehicle now in use, and could also be used by aircraft or tanks.

The test model has a built in tape recorder for recording messages in rear areas. The amplifiers of the new unit are expected to project messages to more than one mile.

•

New Lightweight Jeep. Named the "Aero Jeep," it has an all-aluminum body that weighs only 81 pounds. Other aluminum parts and magnesium wheels make it possible to undercut the old jeep's weight by 44 percent. Weighing a total of 1,475 pounds it is three feet shorter than the present vehicle.

Eighty-five percent of its parts are interchangeable with the current model. The new test vehicle carries a load of more than 1000 pounds over improved roads and 500 pounds over the roughest terrain.

With a top speed of 70 mph, the "Aero Jeep" could be used as a command car carrying four passengers, an ammunition and cargo carrier, a frontline ambulance, a gun carrier, or as a towing vehicle to rescue larger trucks bogged down in the mud.

Its five major parts are the 4-cylinder, L-head engine; front and rear axle assemblies; transmission; transfer case and bell housing.

Preliminary tests indicate that the vehicle has a range of 239 miles on a tank of gasoline, averaging 26.5 miles to the gallon. It is 100 inches long, 60 inches wide and 65.5 inches high.

Under Study

Better Army Pay System. Expected to require at least two years of effort, the study is designed to devise a system which will insure prompt, accurate and legally sufficient payments under all conditions with an economy of personnel and equipment. Particular attention will be paid to operations under combat and emergency conditions.

•

Slip-on Infra-Red Equipment for vehicle headlights. The specially treated plastic filter would be used to cover the head-lamps of vehicles to permit night driving and round-the-clock maintenance.

Manuals

Revised. FM 31-24, "Desert Operations," has been forwarded for approval and publication. This manual is a much needed revision of the old 1942 manual. It contains chapters covering environmental considerations (effect of the desert on troops and equipment), planning for desert service, and tactical considerations. Appendixes cover special training notes, special units and equipment for desert operations and arrangement of command posts.

•

Change 1 to FM 23-5, "U.S. Rifle, Caliber .30, M1," has been sent to higher headquarters for approval and publication. This change consolidates previous changes distributed to the field as OCAFF letters. It covers the revision of our marksmanship courses (known distances and transition), which these letters covered. Other changes concern loading a cartridge clip, adjusting the rear sight, care and cleaning, procedure when the rifle is contaminated during a biological or radiological attack, sighting and aiming exercises, use of the sandbag, hip firing position and the field expedient method of zeroing the battle sight.

•

Change 2 to FM 23-15, "Browning Automatic Rifle, Caliber .30, M1918A2," has been forwarded for approval and publication. This change covers gas adjustment, correct sight alinement and zeroing. In addition to many other minor changes, a large portion of this change is devoted to a complete revision of all the marksmanship courses (known distance and transition).

•

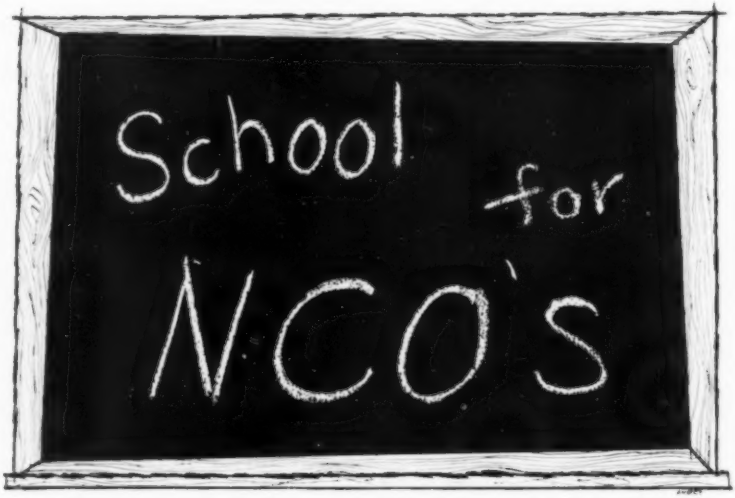
Change 5 to FM 23-30, "Hand and Rifle Grenades," has been sent to higher headquarters for approval and publication. This change contains the following warning:

"All hand grenades air-dropped by malfunctioning parachute or free-dropped must be considered unsafe for use until inspected and approved by qualified ordnance personnel. This precaution applies to M26 fragmentation and M15 white phosphorus grenades in particular."

•

Tank Weapons. The M48 Tank is the subject of a recent publication entitled "Instructional Pamphlet W-4, Familiarization with the Fighting Compartment and Conduct of Fire of the 90-mm Gun Tank, M48."

Until new changes appear in FM 17-12 "Tank Gunnery," this publication is the best available guide for tank company commanders and staff officers concerned with the new 90-mm Gun Tank, M48.



School for NCO's

Lt Harry J. Brockman

WELL TRAINED NCO's are in demand and are valuable. Without them, no organization can run efficiently in either garrison or combat. While some commanders bewail the imagined passing of the ideal noncom, at least one organization has taken matters into its own hands and gone about providing itself with the trained NCO's that it needs.

Such an organization is the Seventh Army in Europe. For over two years, the Seventh Army NCO Academy in Munich, Germany, has been training enlisted leaders of units in Europe. Perhaps this solution to the problem will prove helpful to other commands suffering from a lack of trained noncommissioned officers.

Established in October 1949, by the U. S. Constabulary in Germany, the Academy was taken over by the Seventh Army in November 1951. Instruction is given on the platoon

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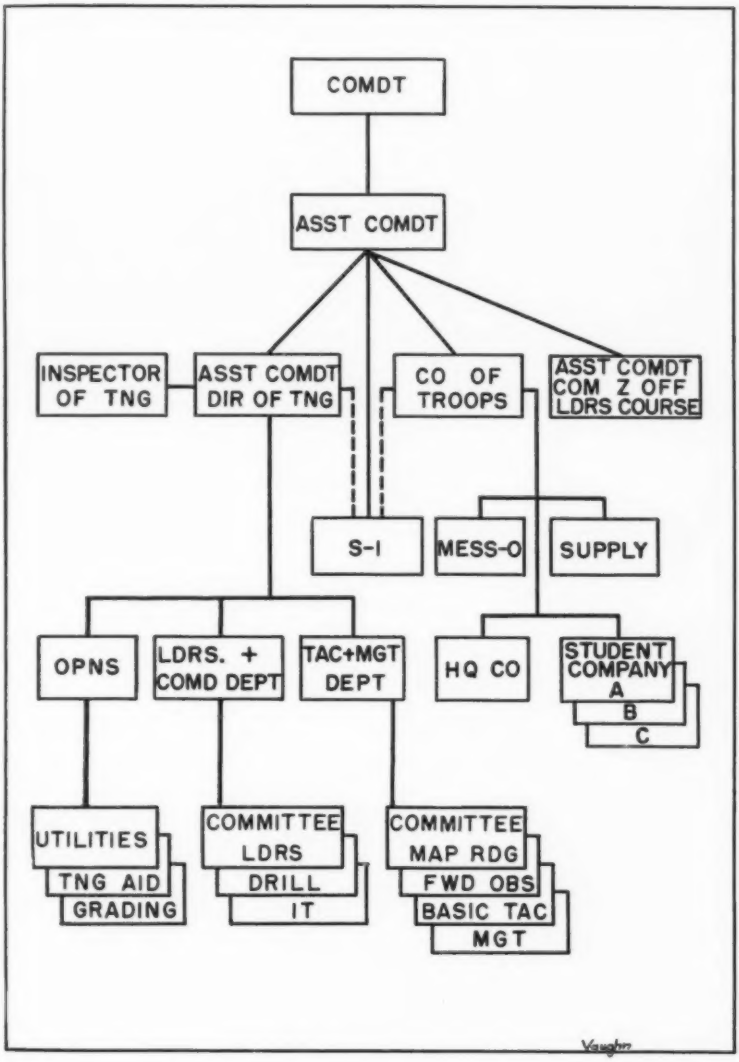
Lt Brockman, an ROTC honor graduate, received his RA commission in June of '50 (Bowling Green State Univ, Ohio). He went to Korea (3 campaigns) as an FO with the 38th FA. Now in Munich, Germany, he is Asst Operations Officer of the 7th Army NCO Academy.


COMDT
ASST COMDT
INSPECTOR OF TNG
ASST COMDT DIR OF TNG
CO OF TROOPS
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LDRS. + COMD DEPT
TAC+MGT DEPT
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COMMITTEE
MAP RDG
FWD OBS
BASIC TAC
MGT
Vaughn

level, with no more than 60 men in a platoon. There are three student companies, each following a five-week cycle.

When a student first arrives at the Academy he is assigned to a student company. Special care is taken in assigning new students to their billets, since the off-duty barracks life of the student is regarded as part of his training. He shares a room with from one to five other men of different branches of the Army and Air Force, so that he may have a better understanding of the other fellow's background and duty assignment. Students may be called upon to fill any position in their student company or in the student battalion. All the formations and details are conducted by students and supervised by members of the staff and faculty.

A great emphasis is placed on instructor training, for it is felt that one of the army's greatest needs is for trained instructors. Each class is designed to enable the students to learn the basic facts presented, apply the rules of good instructor training to those facts, and later teach the subject to members of their units when they return.

The big "pay-off" really comes when each student returns to his parent unit and passes on the knowledge that he has acquired at the school. Armed with the principles of good instructor training and public speaking, each man can become an effective training tool for his own unit.

Each student is required to make numerous student presentations, actually facing a class in order to build up his confidence. The presentations are critiqued and graded on content, instructor poise and continuity. First, the student must realize his good and bad points. Early in the leadership course each man is given a chance to evaluate himself. By striving to emphasize his good points and de-emphasize his bad points, he can perfect his abilities as an instructor and also his abilities as a competent leader.

The students at the Academy are carefully selected. The unit commander is given a quota to be filled by first-three-graders or potential first-three-graders with an AGCT of 90 or better. Of the 16,000 students that have entered the Academy, only 14 per cent have failed to graduate. The students come to the Academy from all units in the European command, including US Air Force Europe. The Air Force students make up approximately 10 per cent of the total student body. They are given the same branch-immaterial

A Tactics Department instructors explain to two students a problem that they will attempt to work out as part of the application stage of a phase of their training as the Seventh Army NCO Academy.

trains its enlisted leaders

courses as the Army students, and contribute considerably to the use of the Air Force in the tactical problems presented.

The faculty of the school consists of 54 instructors divided into two departments—"Tactics and Management," and "Leadership and Command." (See Charts 1 & 2). The students are graded on each major phase of instruction, and these grades make up the individual's final class standing. The maximum number of points possible is 1000, and at least 700 points are required to graduate. Total scores not only include points for the academic grades received, but also for leadership abilities and general military attitude.

Graduation is the climax of five weeks of intensified training that takes the noncom, step by step, through subjects that will enable him to serve his unit better. The staff and faculty of the Academy are always striving to improve the standards of instruction and the subject matter presented, so that when each

NONCOMMISSIONED OFFICERS COURSE PROGRAM OF INSTRUCTION

LEADERSHIP AND COMMAND DEPARTMENT	
Instructor Training	40 hrs.
Leadership	23 "
Drill and Command	19 "
Physical Training	4 "
Character Guidance	4 "
Personal Affairs	3 "
Health Sanitation and Combat First Aid	3 "
Customs and Courtesies	2 "
Troop Information and Education	2 "
TOTAL	100 hrs.
TACTICS AND MANAGEMENT DEPARTMENT	
Map Reading	20 hrs.
Practical Map Exercise	4 "
Forward Observation	15 "
Basic Tactical Principles	14 "
Administration	9 "
Supply and Management	9 "
Maintenance and Inspection	8 "
Sand Table and Map Reading	6 "
Terrain Evaluation	3 "
Intelligence Training	3 "
Russian Army	3 "
Communication	3 "
Night Vision	2 "
Cost Consciousness	1 "
TOTAL	100 hrs.
TOTAL HOURS INSTRUCTION	200 hrs.
Opening Exercise	1 hr.
Graduation	1 hr.
Commandant's Time	6 hrs.
GRAND TOTAL	208 hrs.

man returns to his unit his section leader or company commander can be sure that the time and money devoted to his training have been well spent.

Here's how one organization solved the problem of obtaining trained NCO's. We hope that this example may be of help to others with the same problem.

Books . . .

- Pension and Retirement Rights ..... $ .85
- Map Reading for the Soldier 1.00
- Pointers for Infantry Troop Leaders 1.50
- Company Duties 1.00
- The Non Com's Guide 2.25
- Hand to Hand Combat ..... .25
- Officer's Guide 3.75
- Managing Men 2.00
- Field Manuals ..... Prices on Request
- Army Wife 3.00
- Lee's Lieutenants (by Douglas Southall Freeman) 3 volume set $7.50 each or $18.00 per set
- Calculated Risk (by General Mark Clark) 4.00
- Rommel's Papers 4.75

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